

AD-A032 362

AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCH0--ETC F/G 5/1
IDENTIFICATION OF PERSONAL CHARACTERISTICS OF AIR FORCE CONTRAC--ETC(U)
SEP 76 T J NOVAK, R V WHITLEY

UNCLASSIFIED

SLSR-32-76B

NL

1 OF 2

AD
A032 362

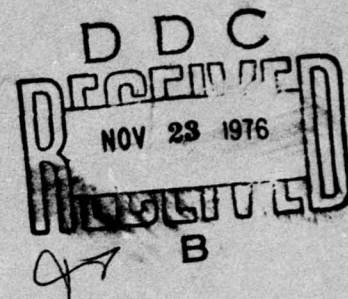


AD A032362



(3)

NW



UNITED STATES AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
Wright-Patterson Air Force Base, Ohio

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

ACCESSION for	
HTIS	White Section <input checked="" type="checkbox"/>
DDC	Diff Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	

IDENTIFICATION OF PERSONAL
CHARACTERISTICS OF AIR FORCE
CONTRACT NEGOTIATORS

Theodore J. Novak, Jr., Captain, USAF
Russell V. Whitley, Captain, USAF

SLSR 32-76B

DDC
RECEIVED
NOV 23 1976
B

AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to determine the potential for current and future applications of AFIT thesis research. Please return completed questionnaires to: AFIT/SLGR (Thesis Feedback), Wright-Patterson AFB, Ohio 45433.

1. Did this research contribute to a current Air Force project?

- a. Yes b. No

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not researched it?

- a. Yes b. No

3. The benefits of AFIT research can often be expressed by the equivalent value that your agency received by virtue of AFIT performing the research. Can you estimate what this research would have cost if it had been accomplished under contract or if it had been done in-house in terms of man-power and/or dollars?

a. Man-years _____ \$ _____ (Contract).

b. Man-years _____ \$ _____ (In-house).

4. Often it is not possible to attach equivalent dollar values to research, although the results of the research may, in fact, be important. Whether or not you were able to establish an equivalent value for this research (3 above), what is your estimate of its significance?

- a. Highly Significant b. Significant c. Slightly Significant d. Of No Significance

5. Comments:

Name and Grade

Position

Organization

Location

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER SLSR-32-76B ✓	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) IDENTIFICATION OF PERSONAL CHARACTERISTICS OF AIR FORCE CONTRACT NEGOTIATORS.	5. TYPE OF REPORT & PERIOD COVERED Master's Thesis ✓	
7. AUTHOR(s) Theodore J. Novak, Jr. / Captain, USAF Russell V. Whitley / Captain, USAF	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS Graduate Education Division School of Systems and Logistics ✓ Air Force Institute of Technology, WPAFB, OH	8. CONTRACT OR GRANT NUMBER(s)	
11. CONTROLLING OFFICE NAME AND ADDRESS Department of Research and Communicative Studies (SLGR) AFIT/SLGR, WPAFB, OH 45433	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS (12) 158 p.	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	12. REPORT DATE 11 Sept 1976	
	13. NUMBER OF PAGES 145	
	15. SECURITY CLASS. (of this report) UNCLASSIFIED	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES APPROVED FOR PUBLIC RELEASE AFR 190-17. JERAL F. GUESS, CAPT, USAF Director of Information		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) CONTRACT NEGOTIATORS NEGOTIATION PROCUREMENT		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Thesis Chairman: Dale R. McKemey, Major, USAF		

DD FORM 1 JAN 73 1473

EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

012 250

mt

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

This thesis focuses on the problem of identifying and rank-ordering the most important characteristics of Air Force contract negotiators. More specifically, it addresses the underlying issue that the selection process for Air Force contract negotiators may be improved by identifying important personal characteristics of negotiators. This identification task was initiated by first reviewing the literature in the negotiation area and then discussing the Delphi technique for data collection. The most important personal characteristics contract negotiators identified in this effort were drawn from expert opinions of active duty Air Force procurement personnel serving in ASD. A consensus about the most important background variables was reached using two rounds of questionnaires. Among the conclusions of this research is a contention that the Air Force needs to look at other characteristics besides education and experience when selecting their negotiators. Further, it is suggested that Air Force policy for procurement personnel needs to be modified so as to give the negotiator a distinct AFSC within the procurement career field. Finally, the demonstrated success of the modified Delphi procedure provides strong support for the use of this methodology in future related research.

1473B

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

SLSR 32-76B

IDENTIFICATION OF PERSONAL CHARACTERISTICS
OF AIR FORCE CONTRACT NEGOTIATORS

A Thesis

Presented to the Faculty of the School of Systems and Logistics
of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

By

Theodore J. Novak, Jr., BS
Captain, USAF

Russell V. Whitley, BA
Captain, USAF

September 1976

Approved for public release;
distribution unlimited

This thesis, written by

Captain Theodore J. Novak, Jr.

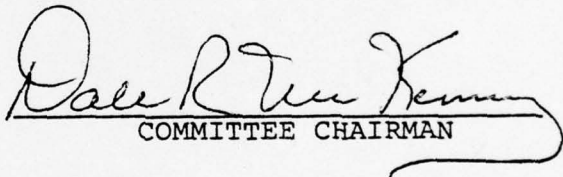
and

Captain Russell V. Whitley

has been accepted by the undersigned on behalf of the
faculty of the School of Systems and Logistics in partial
fulfillment of the requirements for the degree of

MASTER OF SCIENCE IN LOGISTICS MANAGEMENT

DATE: 7 September 1976


COMMITTEE CHAIRMAN

ACKNOWLEDGEMENTS

Foremost, we express our sincere appreciation to our advisor, Major Dale McKemey, for his invaluable assistance, enthusiasm, and untiring patience during the preparation of this thesis.

We also owe a great deal of gratitude to many people for their assistance and encouragement in this endeavor. Those whom a reasonable space allocation will permit thanking individually are: Mr. James Schaffer, Deputy for Procurement/Production, HQ ASD, for validating our questionnaire and allowing us access to the "expert" negotiators within ASD; Major Thomas J. Michalowski, AF Business Research Management Center, for his many constructive criticisms and suggestions; the selected panel of expert negotiators within ASD, for their effort and time in providing the data for this research; our typist, Mrs. Phyllis Reynolds, for her patience, perseverance and truly professional effort.

We would like to recognize the contributions of our wives, Judy and Bee, who demonstrated the background variables of Patience and Understanding to the utmost for their seldom present and usually short-tempered husbands.

Finally, we acknowledge an unknown author for providing us with the following panacea for academic achievement:

Nothing in the world can take the place of Persistence. Talent will not--nothing is more common than unsuccessful men without talent; Genius will not, unrewarded genius is almost a proverb; Education will not, the world is full of educated derelicts. Persistence and Determination alone are omnipotent. The slogan 'Press On' has solved and will always solve the problems of the human race.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
 Chapter	
I. INTRODUCTION	1
Statement of the Problem	1
Definitions	1
Justification	2
Scope	6
Research Objectives	6
Research Question	6
II. PERTINENT FINDINGS AND IDEAS FROM THE LITERATURE	7
The Negotiation Process	7
The Objectives	11
The Ideal Negotiator	13
The Military Air Force Negotiator	17
The Civilian Air Force Negotiator	18
Ideal Negotiator Compared with the Air Force Negotiator	20
III. METHODOLOGY	23
Research Site	23
Population	24

Chapter	Page
Sample	24
Operational Definition	26
Data Gathering	26
Delphi Technique	27
History	27
Process	28
Validity	29
Questionnaire	29
Validity of Questionnaire	30
Analysis	34
Assumptions	35
Limitations	35
IV. ANALYSIS	38
Introduction	38
Data Presentation	38
Iteration 1	38
Iteration 2	44
Additional Analysis	49
V. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS . .	54
Introduction	54
Discussion	54
Conclusions	63
Recommendations	66
APPENDICES	
A. FIRST ITERATION QUESTIONNAIRE	70

APPENDICES

Page

B. LIKERT SCALING FOR INTERNAL CONSISTENCY	83
C. SECOND ITERATION QUESTIONNAIRE	86
D. LISTING OF ALL COMMENTS	116
E. THE SPEARMAN RANK CORRELATION: r_s	135
SELECTED BIBLIOGRAPHY	138
BIOGRAPHICAL SKETCH OF THE AUTHORS	144

LIST OF TABLES

Table	Page
1. Negotiator Background Variables as Presented by Different Writers	14
2. Program Development Phases	21
3. Percent Change from Iteration 1	36
4. Summarized Results of Iteration 1 (with 32 Respondents).	40
5. Additional Background Variables Suggested from Iteration 1	41
6. Summarized Final Results of Iteration 1 (with 35 Respondents).	43
7. Interim Rank Order from Final Results of Iteration 1	45
8. Summarized Final Results of Iteration 2	47
9. Rank Order from Final Results of Iteration 2	48
10. Organization 1 versus Organization 3	51
11. Organization 1 versus Organization 2	52
12. Organization 2 versus Organization 3	53

LIST OF FIGURES

Figure	Page
1. Ideal Negotiator Model	3
2. McDonald Model	9
3. Aeronautical Systems Division Organizational Chart (June 1976)	25
4. Initial Proposed Questionnaire	31
5. Comparison of Initial and Modified Rating Scales	33

CHAPTER I

INTRODUCTION

Statement of the Problem

Various opinions have been stated on what constitutes desirable characteristics of negotiators. Karrass cited the following characteristics necessary for successful performance of a contract negotiator (9:36):

1. planning skills,
2. ability to think under stress,
3. intelligence,
4. verbal ability,
5. product knowledge
6. personal integrity, and
7. ability to perceive and exploit power.

Nierenberg's Need Theory complemented Karrass and also emphasized that knowledge of human nature characterizes a successful negotiator (15:10). The Air Force criteria for selecting contract negotiators is based on education and experience; however, the Air Force selection criteria does not include other desirable characteristics often cited in the literature and thus may be too limited. Consequently, the selection process for Air Force contract negotiators may be improved if other important personal characteristics of negotiators could be identified.

Definitions

1. Traits--distinctive inherent qualities attributed to a person's character.

2. Influences--factors that are learned, developed, or granted which affect a person's performance.

3. Background Variables--consist of traits and influences attributed to a contract negotiator's background.

4. Ideal Negotiator--a theoretical concept of a contract negotiator possessing all the background variables listed in the Ideal Negotiator Model (see Figure 1).

5. Skilled Negotiator--a contract negotiator who possesses a satisfactory combination of the background variables listed in the Ideal Negotiator Model.

Justification

The Air Force's selection process for contract negotiators may have an impact on the economy of the U.S. and the effectiveness of the Air Force to meet its objectives within budgetary constraints. This is due to the fact that the Federal Government is the "principal buyer of goods and services . . . [2:71]" in the United States and it is "the most significant single force in the Nation's business economy [2:71]." In 1974, the Department of Defense (DOD) alone negotiated contracts valued at over 33 billion dollars (28:56). As an agency of the DOD, the Air Force actively participates in contract negotiations.

Negotiated procurement constituted 98 percent of the total dollar expenditures of Air Force contracts issued during the period from July to December 1974 (28:50). For this reason, the Air Force needs to develop skilled

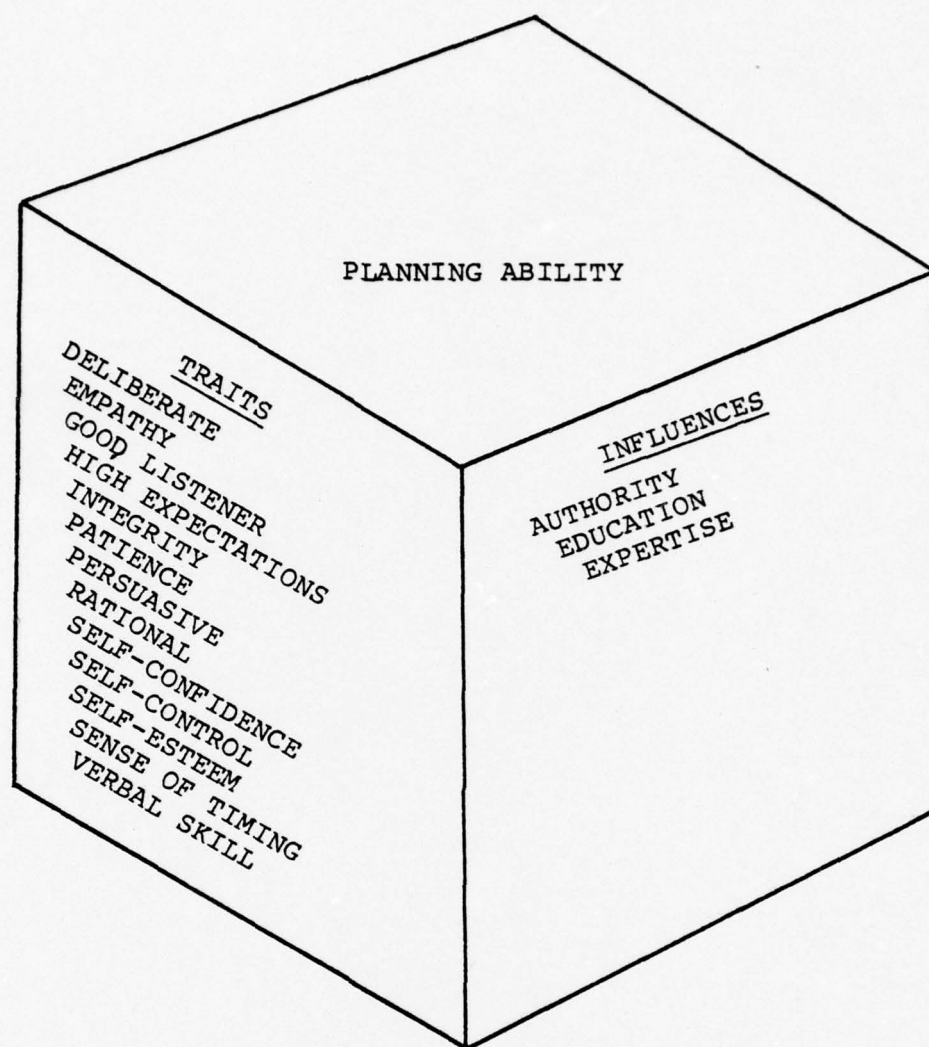


Figure 1

Ideal Negotiator Model

negotiators. The literature supported this need and identified three unique problems which justify the necessity for skilled negotiators. The first problem arises when the Government negotiates with the belief "that the essence of good business is cooperation and fairness . . . [9:96]." Unfortunately, the government representative who negotiates with this belief is often taken advantage of by an exploitive-minded opponent (9:96). Preston suggested that a second problem is the vague specifications contained in high-dollar value procurement contracts. The government negotiator is forced to develop a strategy of reducing or "marking down" the contractor's proposal. Basically, this is no strategy at all (16:36) and may present an obstacle to the successful planning for a negotiation. Finally, the third problem is that the contractor knows the government negotiator cannot "make an all-or-nothing offer because they cannot withdraw completely from the procurement once it has been determined by higher authority [16:35]." These problems often place the government negotiator in an awkward position since "a stalemate seems an indication of the negotiating team's intransigence, inadequate information and lack of bargaining skill [16:35]."

The Air Force's negotiators are both military officers and civilian employees who have numerous job responsibilities. Unfortunately, negotiation is only a corollary to their duties and responsibilities

(26:A14-36,40). Consequently, the development of expertise in negotiating is neglected. Or, as Rule stated: "Only when the Air Force policy changes to develop professional teams of negotiating specialists can we expect to be capably represented at the negotiation tables [18:39]."

Capable representation at the negotiation table should assist in optimizing the five basic objectives of the negotiation process as identified by Lee and Dobler (11:160):

1. To obtain a fair and reasonable price.
2. To persuade the supplier to perform the contract on time.
3. To exert some control over the manner in which the contract is performed.
4. To persuade the supplier to give maximum cooperation to the buyer's company.
5. To develop a sound and continuing relationship with competent suppliers.

The utility gained in optimizing these objectives should result in minimizing the economic problem of scarce resources versus unlimited wants (22:121).

While the actual formal procedures and techniques of the negotiation process have been thoroughly discussed in the literature, less attention has been given to the negotiator per se. However, the human variable of the negotiation process should be considered as one of the

most critical elements. Rule affirms, "The art of conducting negotiations is one of the most important human functions in the world today . . . and one of the least understood [18:A-1]."

Scope

This research effort was limited to the identification of background variables possessed by Aeronautical Systems Division (ASD) contract negotiators and to an assessment of the variables importance in selecting Air Force contract negotiators.

Research Objectives

1. Identify the background variables of selected Air Force contract negotiators.
2. Rank-order the identified background variables in terms of importance to the selected Air Force contract negotiators.

Research Question

What are the most important background variables of an Air Force contract negotiator?

CHAPTER II

PERTINENT FINDINGS AND IDEAS FROM THE LITERATURE

The Negotiation Process

Lee and Dobler defined negotiation as a process of planning, reviewing, and analyzing, used by two opposing groups to reach acceptable agreements or compromises (11:160). Negotiation may also be defined as a process of bargaining between two parties, each with its own viewpoint, and objectives, seeking to reach a mutually satisfactory agreement on, or settlement of, a matter of common concern (2:112-114).

Of the many dimensions of negotiation addressed in the literature, three common elements stand out:

1. Each party's planning, development, and presentation of its position.
2. Each party's analysis and critical evaluation of the other's position.
3. Each party's adjustment of its own position to reflect as much of the other party's views that are considered reasonable and justifiable.

Rierner further pointed out a key factor distinguishing negotiation from "horse trading": if negotiation is to be successful, both buyer's and seller's interests

are maximized. Riemer called procurement negotiation an art of arriving at common understanding through bargaining on the essentials of the contract (17:142).

Of the three common elements in the negotiation process, the planning aspect seems to be the most critical in terms of success (9:149-152). The purpose of the planning phase is to define the objectives to be achieved during the negotiation process in concrete terms. In addition to developing concrete objectives, the negotiator should explicitly know both his maximum and minimum give-and-take positions for reaching those objectives (11:174). Martin suggested that a government negotiator should determine each element of the contractor's costs, as well as appraise what he believes to be the objective and the maximum/minimum positions of the contractor. He also implied that government negotiators often focus entirely on the cost figures presented them by the contractor without having any feel for what the costs should be (13). A possible reason for the limited perspective displayed by the government negotiator in cases like this is lack of time to prepare for negotiations.

To illustrate the need for planning thoroughly for the actual negotiation, McDonald presented a model germane to the negotiation process. The McDonald Model (14:F-1-18) offers a conceptualization of how a skilled negotiator would maximize his defined objectives (Figure 2).

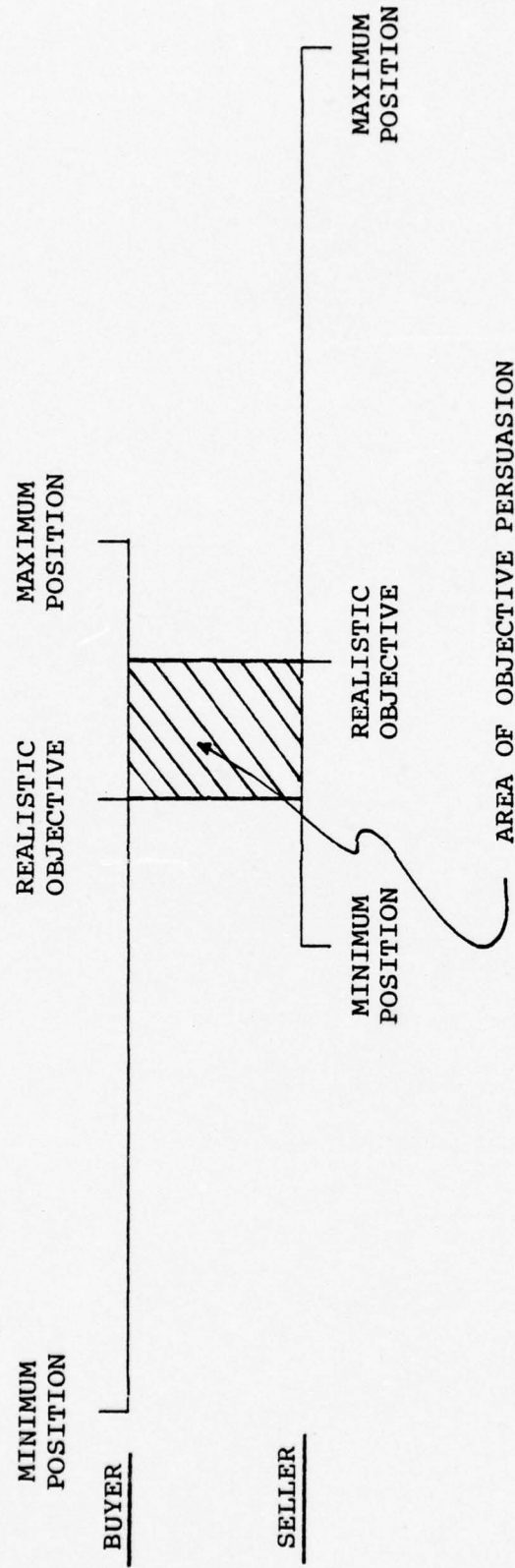


Figure 2
McDonald Model

The process of negotiation in the McDonald Model involves two opposing bargaining positions with defined objectives. The buyer is considered to be the Government negotiating team and the seller is considered to be the contractor's negotiating team. In the model, the contractor's initial objective (maximum position) is higher than the Government's. McDonald inferred that the closer the two initial objectives were, the easier the negotiation process would be (11:175-196). As the negotiations proceed, the contractor makes concessions from his maximum position toward his realistic objective. Likewise, the Government reduces its initial demands, moving from a minimum position toward its realistic objective. As each party approaches the realistic objective, the area between the Government's and contractor's realistic objectives is labeled the "area of objective persuasion." McDonald suggested that the skilled negotiator thrives in this area of objective persuasion by uncovering additional information that would persuade the contractor to reduce his demands (11:176).

The McDonald Model allows speculation on the opportunities a skilled negotiator could put to advantage in the area of objective persuasion. In purchasing high dollar value items from a manufacturing concern, the government negotiator should have analyzed every facet of the contractor's manufacturing process with the idea of

uncovering negotiable tradeoffs in the area of cost, performance or time (19:93). For example, a thorough analysis of a contractor's manufacturing process might have revealed that if the lead time on a government procurement had been increased by two months, production might have been accomplished with fewer machines. Thus, if the government requirement had permitted an increase in lead time, the negotiator might have been willing to sacrifice time for a better price (11:176). However, this tradeoff might have been attained only if the government negotiator had expended the time and effort to conduct an exhaustive evaluation prior to the negotiation session.

In summary, the negotiation process is one of two methods of establishing the price and terms of a government contract. (The second method is Formal Advertising and will not be addressed in this research effort.) However, no matter what the substantive nature of the negotiation may be, successful negotiation is achieved only through the skills, experience, motivation, and openmindedness of the two negotiators (14:F-1-18). The focus is now shifted from the negotiation process to the objectives of the negotiation session.

The Objectives

The five basic negotiation objectives cited by Lee and Dobler (11:160) uniquely complement the objective for negotiation as stated in the Armed Services Procurement

Regulation (ASPR). ASPR states that the objective of negotiators is to "procure supplies and services from responsible sources at fair and reasonable prices calculated to result in the lowest ultimate overall cost to the Government [27:3-110]." Schnitzner lends support to the ASPR objective of a fair and reasonable price when he stated:

If after thorough analysis, the representative of the government concludes that the total position of the contract is fair and reasonable in the mutual best interests of both parties, his (the government negotiator's) acquiescence would represent an equitable negotiation agreement [19:4].

Lee and Dobler inferred that the government negotiator can best accomplish this primary objective of the ASPR by: knowing the contract requirement and as much as he can about the factors underlying the contractor's cost estimates; knowing the areas where contractor contingencies have been included; and more important, knowing the actual cost/price range at which the contractor will be willing to accept the contract (11:173-174). Gaining this knowledge, however, requires time for a thorough preparation.

To support his contention that knowledge via thorough preparation is important to the negotiator, Nierenberg quoted Francis Bacon's essay Of Negotiating (15:50):

If you would work with any man, you must either know his nature and fashions, and so lead him; or know his ends, and so persuade him; or know his weakness and advantages, and so awe him; or know those that have interest in him, and so govern him. In all negotiations of difficulty, a man may not look to sow and reap at once; but must prepare for business, and so ripen it by degrees.

Within the context of the negotiation process and its objectives, a review of the qualifications of an ideal negotiator and a comparison of these qualifications with current Air Force selection criteria is appropriate.

The Ideal Negotiator

In looking at the background variables of an ideal contract negotiator, one of the most important is patience. Constantino found "While no single trait is advocated, a definite consensus reveals patience as the most common and necessary element [3:447]." Karrass identified patience as a "supertactic," as it can bring many favorable results to its user (10:141). The ideal negotiator also should be confident, poised, and have high expectations of himself, for this type of person always wins more in negotiation than do the less confident (9:17).

Constantino also felt the negotiator should have integrity and be honest (3:446). Karrass believed he should be skeptical of others and "Never assume that everything is all right [9:48]!" Hermone averred he should be sensitive and alert to the situation to be successful (8:20) while Bailly stated that the negotiator had to be reasonable (1:186). While these traits are by no means the complete list of preferred inherent qualities, they do represent some commonality of ideas (Table 1).

However, these traits are not enough for an individual to become a skilled negotiator. Lee and Dobler

TABLE 1

NEGOTIATOR BACKGROUND VARIABLES AS PRESENTED
BY DIFFERENT WRITERS

BACKGROUND VARIABLES	KARRASS	CONSTANTINO	LEE AND DOBLER	NIERENBERG	BAILY	HERMONE
Authority	X			X		
Beliefs			X			
Deliberate	X	X	X			
Education	X	X	X			
Empathy	X	X	X			
Experience				X		
Expertise	X		X			X
Good Listener	X		X	X	X	
High Expectations	X			X		
Integrity	X	X				
Patient	X	X	X	X		
Persuasive		X	X			
Planning Ability	X			X	X	X
Rational	X		X	X	X	X
Realistic	X					
Self-confident	X	X	X	X		
Self-control	X		X		X	
Self-esteem	X			X		
Sense of Timing		X		X		
Skepticism	X					
Status	X					
Tactful			X			
Verbal Skill	X		X			

felt that the "Negotiating ability reflects the composite experience of a negotiator's entire life [11:146]." These beliefs are influenced by "education, religion, health, past and present environment, . . . [11:147]," while the negotiator's knowledge consists "of knowing his product, of understanding basic psychology, and of experiencing actual negotiations [11:147]." The negotiator's skills are "the ability to think like his opponent, to communicate, to coordinate, to listen, to appreciate, to be satisfiable, and to direct [11:148]." Lee and Dobler asserted that judgment was the key ingredient in the recipe for negotiating excellence (11:149). Nierenberg added one more factor; the negotiator must have a need, a personal desire he wishes to satisfy, if he is to be successful in negotiation (15:8).

Karrass found that "bargaining skill becomes less important as more power is acquired [9:20]." The "ideal" negotiator therefore needs to have power if his negotiating position is to be strong. All the above factors influence the negotiator, but these influences, along with the desired traits, are not enough for a successful negotiation.

For a negotiator to be successful, the negotiator must plan. "Purchasing executives were in general agreement that a good negotiator must possess, above all else, a high degree of planning [9:34]," since a common weakness

in negotiation was found to be "failure to prepare thoroughly enough [1:186]." Nierenberg found that "The negotiators who prepared--who did their homework--were ahead of the game [15:8]." Part of planning is developing strategies and tactics, but the most important idea is that planning must be thorough if the negotiator is to be successful (1:186).

The background variables identified from the literature were used to develop an ideal conceptual model which served as a basis for comparison of Air Force contract negotiators (Figure 1). The model depicts the ideal negotiator as a multidimensional concept combining various individual traits and influences in some combination with planning ability acting as a moderator. As of August, 1976, the Air Force did not consider the multidimensional traits and attributes portrayed in the ideal negotiator model. Consequently, the current method used by the Air Force to identify potentially skilled negotiators from within the procurement career field may be inadequate. Furthermore, an inadequacy in the selection of Air Force negotiators might impact the negotiation process adversely; i.e., not attaining the ASPR objective of a fair and reasonable price (27:3-110).

For further comparison purposes, attention is now focused on the current selection and development procedures of both military and civilian Air Force contract negotiators.

The Military Air Force Negotiator

Air Force Manual (AFM) 36-1 states that the Procurement Management Staff Officer's duties and responsibilities include "Directs contract award, administration, negotiation, price redetermination, renegotiation, termination and settlement activities [28:A14-35]" and that part of the Procurement Officer's duties are "negotiation and renegotiation . . . [28:A14-39]." There is little difference in the requirements of knowledge, education, and experience required for these two positions. Both are required to have a "knowledge of procurement, industrial management, Government business, law, and production techniques [26:A14-36,40]." Both are required to have "a bachelor's degree, preferably in industrial engineering, industrial management, or business administration [26:A14-36,40]." It is also desired for both to have

. . . a Master's degree in business administration or industrial management or the completion of the Training-with-Industry 'Industrial Planning and Procurement Course,' or the AFIT Advanced Logistics Course [26:A14-36,40].

The Procurement Officer will have completed "a basic Procurement and Production Officer course . . . [26:A14,40]." A main difference between the two is in experience. It is expected that as a Procurement Officer sufficient experience will be gained in negotiation of contracts to permit qualification as a Procurement Management Staff Officer (26:A14-36,40).

Once the Air Force Procurement Officer is chosen, (i.e., he meets all the requirements set forth in AFM 36-1) the ASPR defines his responsibility as a Contracting Officer if he is to negotiate contracts. The ASPR states that the Contracting Officer is the exclusive agent of the Government "to enter into and administer contracts on behalf of the Government . . . [27:3-801.2]." The ASPR further states that two important ideas directly affect negotiation; first, the Contracting Officer "shall not . . . transfer his own responsibilities . . . [27:801.2]" to any of his team specialists, and second, it is normally not possible to negotiate a pricing result which is in strict accord "even with the Government's pricing objective [27:3-801.2]." To the latter idea, the ASPR adds that "Reasonable compromises are normally necessary . . . [27:3-801.2]." Having discussed the qualifications of an Air Force military negotiator, the Air Force civilian contract negotiator qualifications will now be examined.

The Civilian Air Force Negotiator

Air Force Systems Command Manual (AFSCM) 50-5 established the Civilian Procurement Center Development Program (23:1-1). The program is designed to progressively prepare civilian employees in the procurement career field as future managers and potential Air Force contract negotiators (23:1-1).

Initially civilian Air Force contract negotiators enter the Procurement Career Development Program under the "Federal Service Entrance Examination (FSEE) procedures or a comparable test approved by the US Civil Service Commission [23:1-3]." Having achieved satisfactory scores on the FSEE, selection of applicants for assignment to the program is then controlled by a local Civilian Procurement Board (23:1-1). In addition to satisfactory test scores and a personal interview, the Board considers the number of manpower authorization vacancies before selecting qualified applicants into the program (23:1-1). AFSCM 50-5 further suggests that it is desirable for civilian applicants to be college graduates with master's degrees (23:1-3). In screening candidates for trainee positions, preference will be given to individuals having degrees in business oriented educational disciplines, such as business administration, accounting, marketing, or logistics management (23:1-3). Civilian personnel selected under these provisions will enter the procurement development program at the GS-7 level (23:1-3). A brief review of the development program for Air Force civilian personnel will be considered next.

The development program for civilian procurement personnel consists of three formal phases and lasts for 239 weeks. These three phases include formal schooling, on the job training, and job orientation (23:2-1).

Furthermore, to become a contract negotiator, a civilian first must attain a specified level of proficiency in skill area codes A through P (Table 2). Once the Air Force civilian trainee attains this level of proficiency, the ASPR defines his responsibilities as a contract negotiator (27:3-801.2). At this point, the requirements for both civilian and military Air Force contract negotiators are parallel. Therefore, the term Air Force contract negotiator as used in this study represents both the military and civilian personnel who negotiate Air Force contracts. A comparison of the Air Force contract negotiator and the "ideal" negotiator can now be presented.

Ideal Negotiator Compared with
the Air Force Negotiator

The background variables listed in the Ideal Negotiator Model do not match the present Air Force criteria for selection of the Air Force contract negotiator. The Air Force requirements for selection as a negotiator almost completely ignore the many variables found in the Ideal Negotiator Model. In fact, the present Air Force selection criteria only addresses two areas--education and experience--in the Ideal Negotiator Model. However, the Karrass study found that purchasing executives "were least concerned with his [the negotiator's] education . . . [9:23]," and Nierenberg found "Learning by experience is a slow empirical process and can never lead to a broad knowledge

TABLE 2
PROGRAM DEVELOPMENT PHASES (23:2-2)

Development Phase	Skill Area	Skill Area Code
I. BASIC (103 weeks)	Orientation/Overview	A
	Base Procurement	B
	Research & Development Procurement	C
	Subsystems & Equipment Procurement & Production	D
	Systems Procurement & Production	E
II. INTERMEDIATE	Production Planning & Management	F
	Air Force Plant Representative Office	G
	Support Functions of a Buying Organization:	
	• Small Business & Contractor Relations Office	H
	• Industrial Resource Functions	I
	• Pricing Functions	J
	• Contractual Instruments Functions	K
	• Procurement Committee Functions	L
	• Procurement Policy & Management	M
III. PROFESSIONAL (73 weeks)	Assignment as Lead Buyer in a Subsystems and Equipment Division	N
	Systems Procurement Management Development	O
	Assignment at DCS/Procurement & Production HQ AFSC	P
	Areas Requiring Specialized Knowledge	Q

of a subject [15:86]." This is not to discount all types of knowledge and experience necessary for the ideal negotiator, but to look at the large singular emphasis placed on education and experience by the Air Force. Education and experience both are facets of the ideal negotiator, but they may not be enough by themselves.

CHAPTER III

METHODOLOGY

Chapter III addresses the methodology that was applied in this research effort. First, a description of the research site is given. Second, the population and sample is described and then the operational definitions of the variables used in the research are explained. Following the operational definitions is an explanation of the data gathering process. In the remainder of the chapter, a criteria test is presented which illustrates how the data was analyzed for purposes of rank-ordering all background variables. A summary of assumptions/limitations concerning the Delphi methodology concludes the chapter.

Research Site

This study surveyed contract negotiators located at the Aeronautical Systems Division (ASD), Wright-Patterson Air Force Base, Ohio. ASD was chosen as the research site for two reasons. First, ASD is located on the same base as the researchers, thus permitting data collection within the time constraints of thesis completion. Second, ASD is geared to developing and procuring major aeronautical weapon systems used in the Air Force

(24:4-28) and it is assigned over 600 people (6). These 600 plus people assigned to ASD were directly responsible for negotiating twenty-two percent of all contracts in DOD in FY 75 (25:A-4). Therefore, contract negotiators within ASD should represent an aggregation of expertise regarding all facets of the negotiation process.

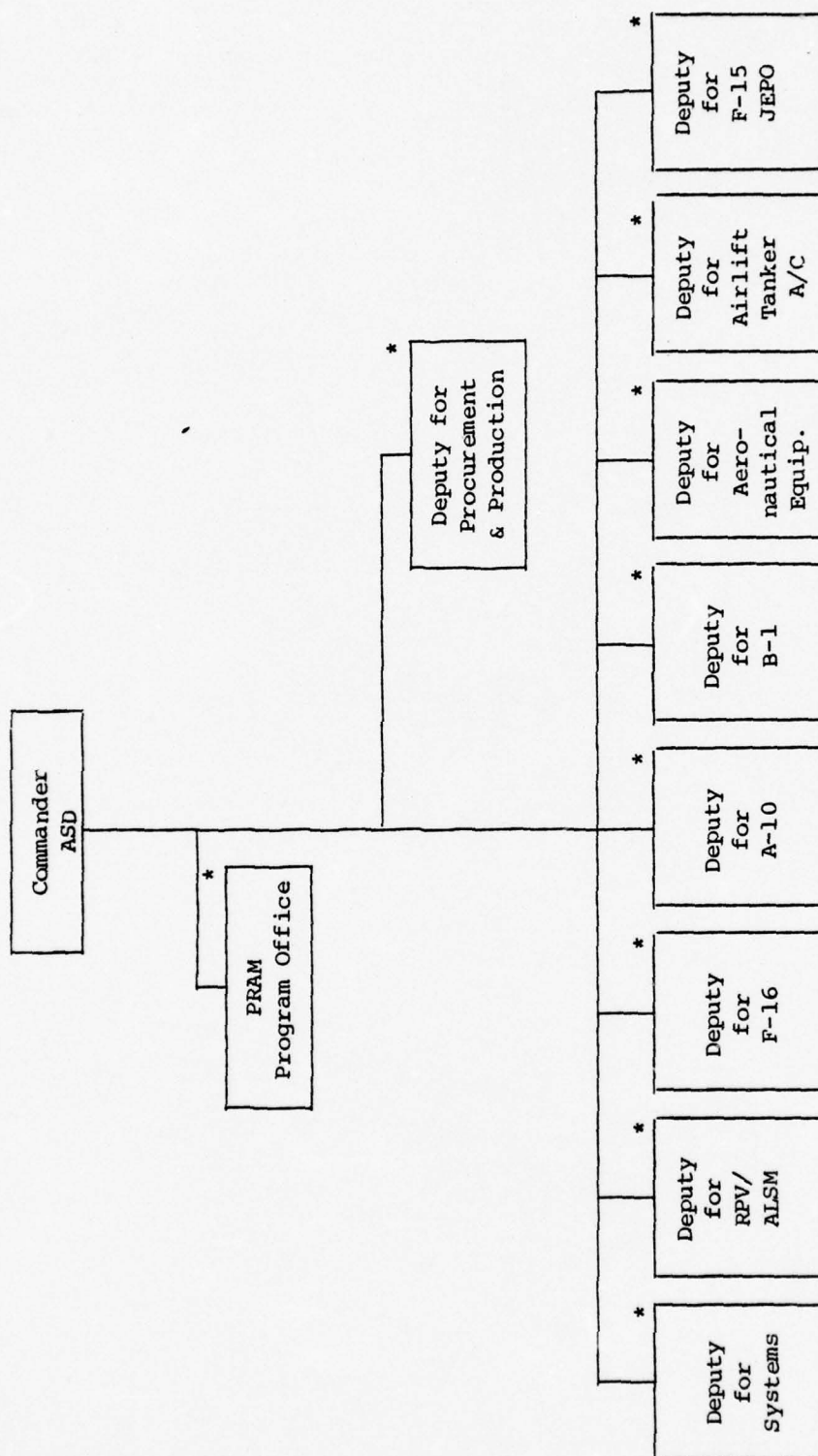
Population

The population consisted of all military and civilian personnel who conducted or participated in contract negotiations at ASD. The total population consisted of 601 people (6).

Sample

A sample was drawn from the ASD population. Personnel included in the sample were selected according to their negotiation expertise as identified by the Deputate, Procurement and Production, ASD. The number of people identified from each of ten ASD directorates (Figure 3) varied from one to fifteen. The manpower size of each directorate was not considered in the selection of the invited sample of skilled negotiators. Instead, the Deputate of Procurement and Production chose those negotiators who in their opinion exemplified the highest expertise in the negotiation arena. This method of selection resulted in a sample size of forty-four.

The methodology used in this research precluded random selection of the sample because it relied on the



*Indicates where invited sample was taken from.

Figure 3
Aeronautical Systems Division Organizational Chart
(June 1976)

respondents being "expert" within their field (7:11). Since the experts were not randomly selected, the sample cannot be assumed to be representative of the population. Further, generalization from the results of this study should take cognizance of the limits imposed by the sample.

Operational Definition

Negotiator background variables are those traits and influences as identified in the literature review which can be measured by a structured opinion questionnaire. Inclusive in this review are the following:

1. Authority
2. Beliefs
3. Deliberate
4. Education
5. Empathy
6. Experience
7. Expertise
8. Good Listener
9. High Expectations
10. Integrity
11. Patient
12. Persuasive
13. Planning Ability
14. Rational
15. Realistic
16. Self-confident
17. Self-control
18. Self-esteem
19. Sense of Timing
20. Skepticism
21. Status
22. Tactful
23. Verbal Skill

Data Gathering

The literature review implicitly suggested that an intuitive rather than an empirical approach was used to

identify the background variables of negotiators. After searching for a more systematic approach to an identification process, the Delphi methodology was chosen as an appropriate technique to accomplish the objectives of this research.

Delphi Technique

History

The Delphi method, which was developed at the RAND Corporation (5:2) is "a set of procedures for eliciting and refining the opinions of a group of people [4:1]."
This method was developed to counter the negative aspects of trying to establish a consensus of opinion from within a group (4:3).

The first negative aspect is: the group consensus is "highly influenced, if not determined, by the views of the member of the group who does the most talking . . . [4:3]." Delphi eliminates this influence by first recording all individual opinions separately and then communicating a summary of the results to the group (4:3).

The second of the negative aspects is: "noise--irrelevant or redundant material that obscures the directly relevant material offered by participants [4:3]."
The Delphi method reduces this "noise" by the use of controlled feedback. This controlled feedback summarizes relevant opinions given on specific items within the survey (4:3).

The third negative aspect is: group pressure placed on individuals to follow the group's consensus (4:3). Delphi reduces this pressure since the opinions are "expressed in terms of a statistical score . . . [5:4]" with there being "no pressure to arrive at a 'consensus' [5:4]."

Process

The success of the Delphi process centers around three characteristics: anonymity, controlled feedback, and statistical "group" responses (4:3). The process for using or maintaining these characteristics results from the highly structured Delphi methodology.

The first step of the Delphi process is to select the experts. Once chosen, each of the experts records his opinions on a specified subject matter. These opinions are tabulated by the researchers, summarized, and are then fed back to the group members. The feedback includes with each question the mean response to the item plus an interquartile (i.e., the middle fifty percent) range of responses. The respondent is then asked in a second iteration of questions to re-evaluate or rethink his original answer with respect to the feedback. In this second situation, if the answer the respondent selects falls outside the interquartile range, he is requested to explain his reason in writing for choosing that answer. Again the results are tabulated in the same manner as

before, but this time the feedback adds one more bit of information--a summary of the reasons why answers outside the interquartile range were chosen. After tabulating the data from the second questionnaire, the respondents are subjected to a final iteration and are given the opportunity to re-evaluate their previous responses. These succeeding iterations should cause a progressive convergence of answers, which normally occurs in three to four iterations (5:7).

Validity

The Delphi process invokes the idea that "several heads are better than one . . . [5:3]," while at the same time reducing the difficulties of domineering individuals, "noise," and group pressure encountered in the normal group situation (5:4). The idea of improved accuracy of a group's opinions through the iterative process has been substantiated (5:4-5), even though there has been "no particular attempt to arrive at unanimity among the respondents . . . [4:3]."

Questionnaire

The instrument used to create and gather data was a structured questionnaire. The initial proposed questionnaire listed twenty-three traits and influences recognized in the literature review as important to a negotiator. Each item had a short identifying description of the trait

or influence being measured. The respondent was to indicate on an ordinal scale from one to five the degree of importance of the trait or influence as perceived. The one to five scale represented a continuum from low importance to high importance with three, the center of the continuum being considered desirable. Further, a free response area following each question would permit the respondents to comment on the trait or influence being evaluated. These comments were to be provided to each respondent in the second iteration. This group feedback would serve as "food for thought" to help stimulate the respondent to a more in-depth answer to each question. Finally, blank spaces at the end of the initial proposed questionnaire would permit the respondent to add any further trait or influence perceived as important (Figure 4). These additional background variables and their descriptions were to be included in the second iteration for all respondents to evaluate. The summarization, arithmetic mean, and interquartile range of data were to be included on succeeding iterations for these additional background variables.

Validity of Questionnaire

Prior to the first iteration of questions being given to the respondents, the validity of the questionnaire was evaluated by two Deputy Directors of Procurement and Production within the invited sample. The two Deputy

TRAITS AND INFLUENCES

1. PATIENCE--The ability of the negotiator to calmly tolerate delay tactics used by his opponent and to tolerate his own peoples' shortcomings in the negotiation process.

1	2	3	4	5
Low Importance		Desirable		High Importance

COMMENTS:

2. SELF-CONFIDENCE--The belief of the negotiator in his own abilities as to being able to successfully negotiate the contract or his part of the contract.

1	2	3	4	5
Low Importance		Desirable		High Importance

COMMENTS:

.
.
.
etc.

24. The list of traits and attributes presented in statements 1 through 23 is by no means complete, or exhaustive. Undoubtedly there are characteristics we have overlooked. Can you suggest any additional traits or influences that you believe were important for your success in negotiating contracts?

(1) _____
DESCRIPTION

(2) _____
DESCRIPTION

Figure 4

Initial Proposed Questionnaire

Directors were then excluded from the sample resulting in an invited sample of forty-two experts.

Each Deputy Director was asked to evaluate the content, empirical, and construct validity of the initial proposed questionnaires. As a result of their evaluations, the Deputy Directors proposed two changes: (1) The Deputy Directors considered the initial proposed rating scale as being too narrow, since all the traits and influences listed in the questionnaire were at least "desirable." Their proposal provided a revised ordinal scale from zero (low importance/no influence) to five (vital) with three now being considered "important" and one "desirable." The researchers agreed that the change in scale would permit the respondent with more discrimination in responding to the questions. A comparison of the initial proposed rating scale and the modified scale used as a result of validation is provided in Figure 5. (2) The Deputy Directors, on the basis of their negotiation experience and expertise, suggested two additional traits be incorporated into the questionnaire--Adaptability and Academic Discipline. The researchers added these additional traits into the questionnaire bringing the total number of background variables used on iteration one to twenty-five (Appendix A).

In addition to evaluating the validity of the questionnaire by the two Deputy Directors, the validity of

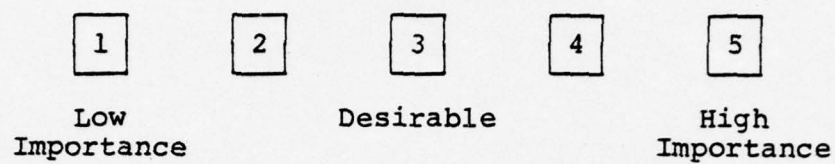
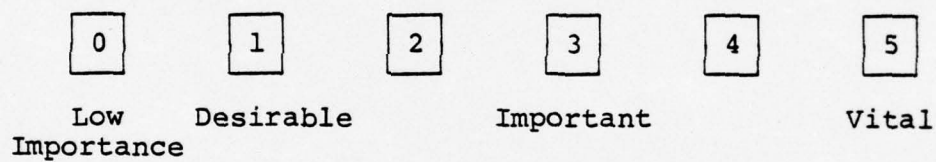
Initial ScaleModified Scale After Validation

Figure 5

Comparison of Initial and Modified Rating Scales

each question was evaluated by the researchers on the first iteration responses using the Likert Technique of Scaling for Interval Consistency (Appendix B). The results of the Likert scaling technique avers that all twenty-five questions used on the first iterations showed differing responses.

After an evaluation of these results (Appendix B) the researchers concluded that all questions elicited opinions and were not conceived of as statements of fact by the respondents.

Analysis

A criteria test--arithmetic mean--was used to determine those background variables most important to Air Force contract negotiators. The criteria test was implemented by first summing the responses from the second iteration for individual questions. These totals were used to calculate the mean response for each question. These means were then used to rank-order the background variables according to the perceived importance of the invited sample. The mean for each question was computed by using the following formula:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i \quad (21:570)$$

where,

\bar{X} = the arithmetic mean,

n = the number of questions, and

X_i = individual i's response to the questions being analyzed.

Assumptions

This research and the use of the Delphi iterative process was conducted under the following assumptions:

1. The "best" negotiators chosen by the Deputate, Procurement and Production ASD, were identified for their ability as negotiators.

2. The Delphi procedure was terminated after the second iteration because convergence of opinions was attained after round two. In this context, convergence was indicated by minor changes in the range of opinions from the first iteration results. Actual differences between iterations one and two depicted an average change of 2.5 percent with the largest change being 7 percent (Table 3).

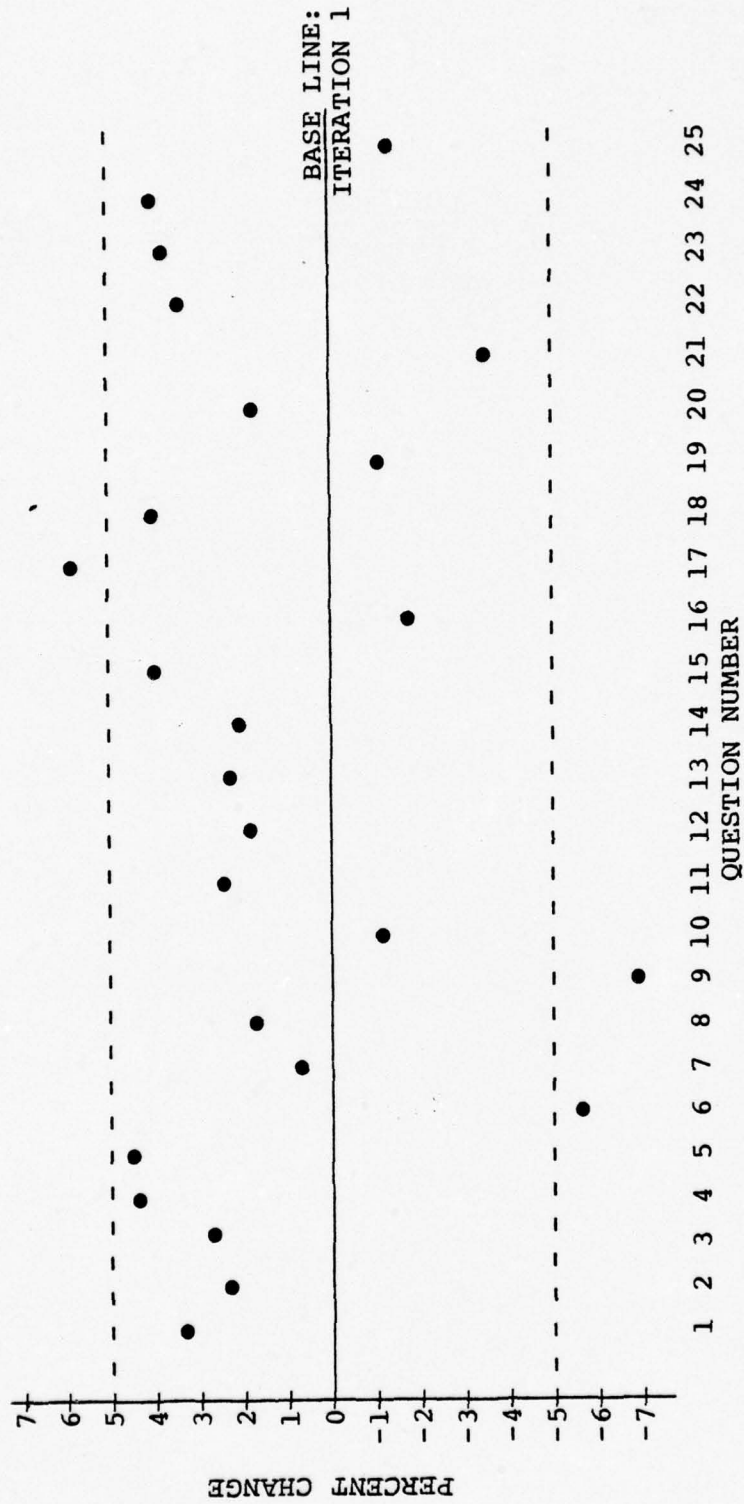
3. All respondents refrained from discussing the consensus information provided to them with other ASD contract negotiators. As such, anonymity was maintained on the part of all respondents during both iterations.

Limitations

1. The results of this research cannot be generalized beyond the sample.

2. This research was limited to a one-year time constraint for thesis completion in accordance with the

TABLE 3
PERCENT CHANGE FROM ITERATION 1



NOTE: 5% equals a 0.3 change along the scale.

NOTE: % change = $\Delta X \div 6$; where ΔX = iteration 2 response - iteration 1 response.

priorities set forth by the Air Force Institute of Technology (AFIT), School of Systems and Logistics.

3. The selected sample was inundated with internal work load requirements, and the time frame of data collection approached the end of the fiscal year.

4. The selected sample for this research effort was also the data source for three other independent research projects during the same time frame.

CHAPTER IV

ANALYSIS

Introduction

The purpose of this chapter is to present the data collected from the questionnaire administration. Included is the identification of two additional traits to complete the list of relevant negotiation background variables. Further, the statistical data analysis presents the rank-ordering of all identified background variables. The chapter concludes with an additional statistical technique for determining correlation between responses from individuals assigned to different organizational entities.

Data Presentation

The Delphi technique employed in this research effort resulted in two iterations of collecting data.

Iteration 1

Forty-two questionnaires (Appendix A) were mailed to the invited sample within the ten Directorates, Procurement and Production, ASD. Because of the proximity of location, ten days were considered adequate for the respondents to complete the first questionnaires and return the results. However, the researchers anticipated

unforeseen delays and decided that a seventeen-day point would serve as the final cutoff date for preparing the second questionnaire. At the expiration of the seventeen-day cutoff point, 32 responses had been received which represented a 76 percent response rate.

Based on the 76 percent response rate, the researchers tabulated the arithmetic mean and determined the interquartile range for each question. The summarized results of this analysis are presented in Table 4.

The summarized results tabulated in Table 5 served as one of three inputs for developing the second questionnaire. The second input to the second questionnaire was a summarization of the feedback obtained in the "Comments" section of the first questionnaire. These explanatory remarks for evaluating the background variables were provided in context as "food for thought" items in the second questionnaire (Appendix C). The third input to the second questionnaire was derived from a survey of thirty possible background variables listed in the "Additional Traits" section of the first questionnaire. However, of the thirty background variables proposed, only two (Reputation and Task Orientation) were perceived to have merit for future consideration (Table 5). These two were the only traits that did not conceptually relate to other existing background variables.

TABLE 4
SUMMARIZED RESULTS OF ITERATION 1
(WITH 32 RESPONDENTS)

Question Number	Mean Response for each Question	Interquartile Range (50%) of Responses	
		High	Low
1	3.44	4	3
2	4.50	5	4
3	3.94	5	3
4	3.84	5	3
5	4.03	5	3
6	2.75	4	2
7	3.88	5	3
8	3.97	5	3
9	4.16	5	3
10	3.72	4	3
11	3.81	5	3
12	1.84	3	1
13	2.84	4	2
14	3.91	5	3
15	3.34	4	3
16	3.63	4	3
17	3.88	5	3
18	3.66	5	3
19	2.03	3	0
20	3.44	4	3
21	1.00	2	0
22	3.31	4	3
23	3.81	5	3
24	4.16	5	4
25	2.22	3	1

TABLE 5
 ADDITIONAL BACKGROUND VARIABLES
 SUGGESTED FROM ITERATION 1

Variable	Accepted/Rejected
1. Reputation	Accepted
2. Dedication to the task	Accepted-- combined into one variable-- Task Orientation
3. The ability to work as a team	
4. Acceptance of responsibility	
5. Belief in the USAF mission	
6. Understanding of the "American Business System"	
7. Experience	Rejected--related to question 23
8. Ability to get along	Rejected--related to question 1
9. Innate sense of reasonableness	Rejected--related to question 5
10. Aggressiveness	Rejected--related to question 20
11. Team control	Rejected--related to question 19
12. Personal Projection	Rejected--related to ques. 14,19
13. Stress	Rejected--related to question 3
14. Perseverance	Rejected--related to question 1
15. Decisiveness	Rejected--related to ques. 2, 20
16. Imagination	Rejected--related to ques. 17,24
17. Sense of humor	Rejected--related to question 20
18. Ability to express ideas clearly	Rejected--related to question 8
19. Good debater	Rejected--related to ques. 8, 10
20. Tenacity	Rejected--related to question 9
21. Ability to analyze	Rejected--related to ques. 5, 24
22. Analysis by comparison	Rejected--related to question 23
23. Rapid mental mathematics	Rejected--related to ques. 5, 24
24. High energy level	Rejected--related to question 1
25. Understanding of human behavior (body language)	Rejected--related to question 6
26. Sense of individual competitiveness	Rejected--related to question 15
27. Ability to recover	Rejected--related to question 24
28. Enthusiasm	Rejected--related to question 36
29. The ability to not talk too much	Rejected--related to question 7
30. Persistence	Rejected--related to question 37

The procedure used to decide which of the additional background variables to include in the second questionnaire was somewhat subjective. The two researchers and a member of the faculty, Department of Research, AFIT, School of Systems and Logistics, formed a panel and reviewed the suggested thirty additional traits and influences for validity or redundancy. The criteria established for accepting a new background variable for inclusion in the second questionnaire was total consensus of opinion by all panelists. Using this selection criteria, "Reputation" and "Task Orientation" were included with the second questionnaire. The addition of these two increased the total number of background variables to be evaluated by the respondents on Iteration 2 to twenty-seven.

Five days after the seventeen-day cutoff date of iteration one, three additional completed questionnaires were received. As such, this addition increased the total number of questionnaires received on Iteration one to 35, which represented an 83 percent response rate. Although the late responses were not used in preparation of the second questionnaire, the results were tabulated and incorporated into a complete data analysis for Iteration one (Table 6). Having analyzed the results of Table 6, it is significant to note that the interquartile range of only questions 4, 8, and 13 changed. Each of the three questions showed a decrease in interquartile range of one

TABLE 6

SUMMARIZED FINAL RESULTS OF ITERATION 1
(WITH 35 RESPONDENTS)

Question Number	Mean Response for each Question	Δ^* From Interim Results (Table 5)	Interquartile Range (50%) of Responses		Interquartile Range from Interim Iteration 1 where Range was Differ- ent (Table 5)	
			High	Low	High	Low
1	3.43	-.01	4	3		
2	4.49	-.01	5	4		
3	3.89	-.05	5	3		
4	4.11	.27	5	3	5	4
5	4.06	.03	5	3		
6	2.91	.16	4	2		
7	3.89	.01	5	3		
8	4.03	.06	5	3	5	4
9	4.09	-.07	5	3		
10	3.77	.05	4	3		
11	3.83	.02	5	3		
12	1.94	.10	3	1		
13	3.00	.16	4	2	4	3
14	3.89	-.02	5	3		
15	3.43	.09	4	3		
16	3.67	.04	4	3		
17	3.91	.03	5	3		
18	3.69	.03	5	3		
19	2.00	-.03	3	0		
20	3.49	.05	4	3		
21	1.11	.11	2	0		
22	3.32	.01	4	3		
23	3.86	.05	5	3		
24	4.14	-.02	5	4		
25	2.20	-.02	3	1		

* Δ = final iteration 1 mean - interim iteration 1 mean

unit. Because of these minor changes as experienced by the addition of three late responses, the researchers felt that the validity of inputs to the second questionnaire was not affected.

Finally, the completed data analysis of Iteration one using all thirty-five questionnaires (Table 6) provided the basis for an interim rank-ordering of the twenty-five traits and influences identified in the first questionnaire. The presentation of this interim rank-order is found in Table 7.

Iteration 2

Forty-two second iteration questionnaires (Appendix C) were sent out to the invited sample of "expert" negotiators within ASD. Because of the proximity of the research site, the respondents were asked to complete and return the questionnaires within ten days after receipt. However, due to known heavy internal work load requirements of the respondents, the researchers anticipated a slight delay in response and extended the due date another seven days. As in Iteration one, seventeen days were felt to be adequate time for all responses to be returned so that preparation of the third questionnaire could begin. At the expiration of the seventeen-day cutoff date, thirty-one responses had been received which represented a 74 percent response rate. Of the thirty-one questionnaires returned, four were incomplete in that all twenty-seven questions were not

TABLE 7

INTERIM RANK ORDER FROM FINAL RESULTS OF ITERATION 1

Rank	Iteration 1		Interim*	
	Background Variable	Mean	Mean	Rank
1	Self-confidence	4.49	4.50	1
2	Adaptability	4.14	4.16	2 (tie)
3	Integrity	4.11	3.84	8
4	Deliberate	4.09	4.16	2 (tie)
5	Rational	4.06	4.03	3
6	Verbal Skill	4.03	3.97	4
7	Realistic	3.91	3.88	7 (tie)
8	Self-control	3.89	3.94	5
	Authority	3.89	3.91	6
	Good Listener	3.89	3.88	7 (tie)
9	Experience	3.86	3.81	9 (tie)
10	Planning Ability	3.83	3.81	9 (tie)
11	Persuasive	3.77	3.72	10
12	Self-esteem	3.69	3.66	11
13	Skepticism	3.67	3.63	12
14	Sense of Timing	3.49	3.44	13
15	High Expectations	3.43	3.34	14
	Patience	3.43	3.44	13
16	Tactfulness	3.32	3.31	15
17	Expertise	3.00	2.84	16
18	Empathy	2.91	2.75	17
19	Academic Discipline	2.20	2.22	18
20	Status	2.00	2.03	19
21	Education	1.94	1.84	20
22	Beliefs	1.11	1.00	21

*These are results from Table 5.

answered. Due to these incomplete responses, it was decided to eliminate the four incomplete questionnaires entirely and begin tabulating results of the second iteration using the twenty-seven remaining questionnaires.

On the basis of the twenty-seven questionnaires, representing a 64 percent response rate, the arithmetic mean and interquartile range for each question was determined. Summarized final results of Iteration two to include means and interquartile ranges for the background variables are depicted in Table 8. Table 8 also lists a percentage change in means from Iterations 1 and 2. From the final results of Iteration two, all answers were tabulated enabling the researchers to finalize a rank-order of all twenty-seven traits/attributes (Table 9). The rank order ranges from number 1, Self-Confidence (most important) to number 23, Beliefs (least important). Four ties were noted to exist--Integrity and Adaptability for the number 2 position; Self-esteem and Good Listener for the number 10 position; Persuasive and Task Orientation for the number 11 position; and Deliberate and High Expectations for the number 12 position.

In summary, after analyzing the final results presented in Table 8, the rank ordering of the background variables in Table 9 and the percent change of responses from Iteration one to Iteration two (Table 3) it was concluded that convergence of opinions was reached and no

TABLE 8
SUMMARIZED FINAL RESULTS OF ITERATION 2

Question Number	Mean Response for each Question	Δ^* From Interim Results (Table 6)	Interquartile Range (50%) of Responses		Interquartile Range from Interim Iteration 1 where Range was Different (Table 6)	
			High	Low	High	Low
1	3.63	.20	4	3		
2	4.63	.14	5	4		
3	4.04	.15	5	4	5	3
4	4.37	.26	5	4		
5	4.30	.27	5	4	5	3
6	2.56	-.35	3	2	4	2
7	3.93	.04	4	4	5	3
8	4.11	.08	5	4		
9	3.67	-.42	4	3	5	3
10	3.70	-.07	4	4	4	3
11	3.96	.13	5	3		
12	2.04	.10	3	1		
13	3.12	.12	4	3		
14	4.00	.11	4	4	5	3
15	3.67	.24	4	3		
16	3.56	-.11	4	3		
17	4.26	.35	5	4	5	4
18	3.93	.24	4	3	5	3
19	1.93	-.07	3	1	3	0
20	3.41	.08	4	3		
21	.89	-.22	1	0	2	0
22	3.52	.20	4	3		
23	4.07	.21	4	4	5	3
24	4.37	.23	5	4		
25	2.11	-.09	3	1		
26	3.70	NA	4	3	NA	
27	3.48	NA	4	3	NA	

* Δ = iteration 2 mean - iteration 1 mean

TABLE 9

RANK ORDER FROM FINAL RESULTS OF ITERATION 2

Iteration 2		Iteration 1		
Rank	Background Variable	Mean	Mean	Rank
1	Self-confidence	4.63	.49	1
2 { tie	Integrity	4.37	4.11	3
	Adaptability	4.37	4.14	2
3	Rational	4.30	4.06	5
4	Realistic	4.26	3.91	7
5	Verbal Skill	4.11	4.03	6
6	Experience	4.07	3.86	9
7	Self-control	4.04	3.89	8 (tie)
8	Authority	4.00	3.89	8 (tie)
9	Planning Ability	3.96	3.83	10
10 { tie	Self-esteem	3.93	3.69	12
	Good Listener	3.93	3.89	8 (tie)
11 { tie	Persuasive	3.70	3.77	11
	Task Orientation	3.70	NA	NA
12 { tie	Deliberate	3.67	4.09	4
	High Expectations	3.67	3.43	15 (tie)
13	Patience	3.63	3.43	15 (tie)
14	Skepticism	3.56	3.67	13
15	Tactfulness	3.52	3.32	16
16	Reputation	3.48	NA	NA
17	Sense of Timing	3.41	3.49	14
18	Expertise	3.12	3.00	17
19	Empathy	2.56	2.91	18
20	Academic Discipline	2.11	2.20	19
21	Education	2.04	1.94	21
22	Status	1.93	2.00	20
23	Beliefs	.89	1.11	22

further iterations were necessary. A combined summarization of the comments section on both Iterations one and two is provided in Appendix D. The comment section following each question on the second questionnaire was provided to the respondent if his response did not fall within the interquartile range for each question of the first questionnaire. It was found that 28 out of 675 answers or 4 percent of all responses fell outside the bracketed interquartile range.

Additional Analysis

Even though the objectives of this research had been completed, an additional area was partially explored with the given, limited data. The main concern was to establish if the individual organizations were responding as individual entities or as a group.

This concern led to establishing a null hypothesis of:

$H_0: \rho = 0$, each organization tested responded as an independent entity

and an alternative hypothesis of:

$H_1: \rho \neq 0$, the two organizations tested responded as a total entity.

The Spearman Rank Correlation (Appendix E) was chosen as the statistical technique to test the hypothesis. Since the sample chosen was according to expertise the ten organizations did not produce the same number of respondents; in fact, only three of the ten organizations

produced more than three respondents. These three organizations which had more than three respondents were selected to be tested using the Spearman Rank Correlation technique.

The first comparison involved organization 1 with ten respondents and organization 3 with six respondents. Table 10 presents the data and computations of the Spearman Rank Correlation coefficient (r_s). Since r_s ($=.82234$) exceeds the critical value ($r_{\text{critical}} = \pm .5757$), H_0 is rejected; that is, organizations 1 and 2 did not respond as independent entities.

The second comparison was between organization 1 with ten respondents and organization 2 with four respondents. Table 11 presents the data and calculations for this comparison. As r_s ($=.87882$) exceeds the critical value ($r_{\text{critical}} = \pm .5757$), H_0 is rejected.

The third comparison involved organization 2 with its four respondents and organization 3 with its six respondents (Table 12). Although this comparison had the smallest difference between r_s ($=.76129$) and r_{critical} ($= \pm .5757$), r_s still exceeded r_{critical} with the results of H_0 being rejected.

TABLE 10
ORGANIZATION 1 VERSUS ORGANIZATION 3

i	X_i	$R(X_i)$	Y_i	$R(Y_i)$	d_i	d_i^2
1	3.5	19.5	3.83	13.0	6.5	42.25
2	4.6	1.5	4.67	1.0	.5	.25
3	4.2	7.0	4.33	4.5	2.5	6.25
4	4.4	3.5	4.33	4.5	-1.0	1.00
5	4.4	3.5	4.33	4.5	-1.0	1.00
6	2.5	23.0	3.33	21.0	2.0	4.00
7	3.9	15.0	4.33	4.5	10.5	110.25
8	4.1	9.0	4.00	10.0	-1.0	1.00
9	4.0	11.5	3.83	13.0	-1.5	2.25
10	4.0	11.5	3.50	18.0	-6.5	42.25
11	4.2	7.0	4.00	10.0	-3.0	9.00
12	2.1	24.5	2.17	25.0	-.5	.25
13	3.22	22.0	3.50	18.0	4.0	16.00
14	3.9	15.0	4.33	4.5	10.5	110.25
15	3.7	17.0	3.67	15.5	1.5	2.25
16	4.0	11.5	3.33	21.0	-9.5	90.25
17	4.3	5.0	4.33	4.5	.5	.25
18	4.0	11.5	3.83	13.0	-1.5	2.25
19	2.1	24.5	2.17	2.5	.5	.25
20	3.6	18.0	3.17	23.0	-5.0	25.00
21	.6	27.0	1.33	27.0	0.0	0.00
22	3.4	21.0	3.67	15.5	5.5	30.25
23	4.2	7.0	4.17	8.0	-1.0	1.00
24	4.6	1.5	4.00	10.0	-8.5	72.25
25	1.9	26.0	2.17	25.0	1.0	1.00
26	3.9	15.0	3.50	18.0	-3.0	9.00
27	3.5	19.5	3.30	21.0	-1.5	2.25

$$\sum d_i^2 = 582.00$$

where,

i = the question number

X_i = the average response to question i for Organization 1

$R(X_i)$ = the rank assigned to a response based on X_i

Y_i = the average response to question i for Organization 2

$R(Y_i)$ = the rank assigned to response based on Y_i

$d_i = R(X_i) - R(Y_i)$

$$r_s = 1 - \frac{6(582)}{27(729-1)} = .82234$$

$$r_{crit.} = \pm .5757$$

TABLE 11
ORGANIZATION 1 VERSUS ORGANIZATION 2

i	X_i	$R(X_i)$	Y_i	$R(Y_i)$	d_i	d_i^2
1	3.50	19.5	3.50	17.0	1.5	2.25
2	4.60	1.5	4.75	1.5	0.0	0.00
3	4.20	7.0	3.75	12.5	-5.5	30.25
4	4.40	3.5	4.50	4.5	-1.0	1.00
5	4.40	3.5	4.50	4.5	-1.0	1.00
6	2.50	23.0	2.75	23.5	-.5	.25
7	3.90	15.0	4.00	11.0	4.0	16.00
8	4.10	9.0	4.25	7.5	1.5	2.25
9	4.00	11.5	3.25	21.0	-9.5	90.25
10	4.00	11.5	3.50	17.0	-5.5	30.25
11	4.20	7.0	4.00	11.0	-4.0	16.00
12	2.10	24.5	2.25	25.0	-.5	.25
13	3.22	22.0	3.00	22.0	0.0	0.00
14	3.90	15.0	3.50	17.0	-2.0	4.00
15	3.70	17.0	3.50	17.0	0.0	0.00
16	4.00	11.5	3.50	17.0	-5.5	30.25
17	4.30	5.0	4.50	4.5	.5	.25
18	4.00	11.5	4.00	11.0	.5	.25
19	2.10	24.5	1.75	27.0	-2.5	6.25
20	3.60	18.0	3.75	12.5	5.5	30.25
21	.60	27.0	1.50	26.0	1.0	1.00
22	3.40	21.0	3.50	17.0	4.0	16.00
23	4.20	7.0	4.25	7.5	-.5	.25
24	4.60	1.5	4.75	1.5	0.0	0.00
25	1.90	26.0	2.75	23.5	2.5	6.25
26	3.90	15.0	4.50	4.5	10.5	110.25
27	3.50	19.5	3.50	17.0	1.5	2.25
						$\Sigma d_i^2 = 397.00$

where,

X_i = the average response to question i for Organization 1

Y_i = the average response to question i for Organization 2

$$r_s = 1 - \frac{6(397)}{27(729-1)} = .87882$$

$$r_{crit.} = \pm .5757$$

TABLE 12
ORGANIZATION 2 VERSUS ORGANIZATION 3

i	X_i	$R(X_i)$	Y_i	$R(Y_i)$	d_i	d_i^2
1	3.50	17.0	3.83	13.0	4.0	16.00
2	4.75	1.5	4.67	1.0	.5	.25
3	3.75	12.5	4.33	4.5	8.0	64.00
4	4.50	4.5	4.33	4.5	0.0	0.00
5	4.50	4.5	4.33	4.5	0.0	0.00
6	2.75	23.5	3.33	21.0	1.5	2.25
7	4.00	11.0	4.33	4.5	6.5	42.25
8	4.25	7.5	4.00	10.0	-2.5	6.25
9	3.25	21.0	3.83	13.0	8.0	64.00
10	3.50	17.0	3.50	18.0	-1.0	1.00
11	4.00	11.0	4.00	10.0	1.0	1.00
12	2.25	25.0	2.17	25.0	0.0	0.00
13	3.00	22.0	3.50	18.0	4.0	16.00
14	3.50	17.0	4.33	4.5	12.5	156.25
15	3.50	17.0	3.67	15.5	1.5	2.25
16	3.50	17.0	3.33	21.0	-4.0	16.00
17	4.50	4.5	4.33	4.5	0.0	0.00
18	4.00	11.0	3.83	13.0	-2.0	4.00
19	1.75	27.0	2.17	25.0	2.0	4.00
20	3.75	12.5	3.17	23.0	-10.5	110.25
21	1.50	26.0	1.33	27.0	-1.0	1.00
22	3.50	17.0	3.67	15.5	-1.5	2.25
23	4.25	7.5	4.17	8.0	-.5	.25
24	4.75	1.5	4.00	10.0	-8.5	72.25
25	2.75	23.5	2.17	25.0	-1.5	2.25
26	4.50	4.5	3.50	18.0	-13.5	182.25
27	3.50	17.0	3.30	21.0	-4.0	16.00
					Σd_i^2	= 782.00

where,

X_i = the average response to question i for Organization 2

Y_i = the average response to question i for Organization 3

$$r_s = 1 - \frac{6(782)}{27(729-1)} = .76129$$

$$r_{crit.} = \pm .5757$$

CHAPTER V

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This final chapter discusses the most provocative traits and influences found in the results of both rounds of questionnaire administration. Several conclusions are presented dealing with the research question. Also, a conclusion is offered on the appropriateness of the modified Delphi methodology used in this effort. Finally, two recommendations for further research are forwarded.

Discussion

Of the twenty-seven traits/influences identified in the literature and by the invited sample, seven were taken to be "most provocative issues" and worthy of further discussion. The seven traits/influences with the richest implications in the "Comments" sections of the questionnaires were: Planning Ability, Patience, Self-confidence, Rational (Judgment), Authority, Experience, and Education. Each of these traits/influences is discussed individually.

Planning Ability. The literature reported that of the three common elements characteristic of the negotiation process, planning ability seemed to be most critical in terms of success (9:149-52). Further, the literature

suggested that in the McDonald Model the skilled government negotiator could be more successful in the "area of objective persuasion" if he took the time and expended the effort to analyze every facet of the contractor's manufacturing process prior to negotiation (11:176). The literature also inferred that the government negotiator could best accomplish the primary objective of ASPR by gaining as much knowledge as possible about the contractor's financial position prior to the negotiation session (11:173-174). It was obvious from reviewing the literature that Planning Ability was thought to be the "capstone" attribute essential for the success of any negotiation. However, the results of this study ranked Planning Ability number 9, or .67 units less than the number one ranked trait Self-confidence. Typical condensed comments offered by the respondents were the following:

1. Planning Ability is essential but the government negotiator never has the time to carefully preplan his courses of action before actual negotiation.
2. Planning Ability is essential, but many times too much preplanning can be a waste because once negotiations commence the situation may change.
3. Preplanning is good, but one should recognize that during negotiations, changes can occur that could totally negate a preplanned course of action.

The above responses indicate a dichotomy of opinions between the experts. One segment insinuates that additional unrelated negotiation duties and responsibilities prevent the government negotiator from taking the time to plan thoroughly prior to actual negotiation. The other segment, however, contends that adequate time for preplanning is an irrelevant issue, since negotiations seldom follow a preplanned course of action. The researchers suggest, however, that in order to adjust these plans as negotiation progresses it is necessary for the government negotiators to carefully preplan their contingency courses of action as well as their main course of action. The researchers perceive that the Air Force needs to recognize that perhaps planning is the capstone background variable needed for negotiators.

Patience. The literature inferred that Patience was one of the most important background variables of an ideal contract negotiator. Patience was cited as the most common and necessary element in negotiations (3:447) and Karrass even identified it as the "supertactic" (10:141). However, Patience was ranked number 13, one unit less than the number one ranked trait. Some typical condensed comments offered by the respondents were:

1. Patience ceases to be a virtue when it wastes time and money.

2. Patience is very important but more important is to be able to sense when a show of impatience is required to get the job done.

In essence, personnel currently engaging in day-to-day negotiations disagree with the literature and view Patience as a situational trait--sometimes important and other times superfluous. For example, the sample strongly felt that Patience is very important for a negotiator when dealing with his own people, but not necessarily his opponents. The inference in the respondents' answers, taken in context of all questions, is that time forms a criterion that must be met. The result from this time criterion is that patience can waste time and when it does, impatience must be shown to move the negotiations forward. The responses also infer that planning contingencies were not made and that impatience results as a form of frustration to conclude the negotiation. In either case, the lack of patience seems to be contrary to the variables of Rational, and Self-control which were ranked 3 and 7 respectively. This violation tends to confirm the time criterion as being the driving force toward the use of impatience, as it seemed to be the driving force in poor planning.

Self-confidence. The literature suggested that Self-confidence is a desirable but not absolutely essential or vital trait for a skilled negotiator to possess. However, the literature also implies that a person who is

self-confident, poised, and has high expectations of himself usually wins more in negotiations than the less confident (9:17). However, the sample used in this study ranked Self-confidence as the number one trait. Some typical condensed comments offered by the respondents were:

1. In my observations this trait is always present in what I would consider experts.

2. Of prime importance. You cannot do a job well if you feel it is beyond your capabilities.

The panel of experts perceived that Self-confidence is vital for a government negotiator to believe in his own abilities to successfully negotiate the contract or his part of the contract. They strongly felt that a self-confident person would always win more in negotiations than a less confident person.

On the other hand, the experts ranked High Expectations, a closely related concept to Self-confidence, in a tie for the number 12 position, .96 units less than the number one ranked trait, Self-confidence. They viewed High Expectations as a trait that varied with the degree of subjectivity/objectivity of the negotiators' position. For example, the panel thought that High Expectations are important only when the negotiator establishes realistic, fair and reasonable goals. If the negotiator had set high expectations based on whimsical desires and not logic, then the respondents felt that high expectations would be

dysfunctional in the negotiation process. For example, if the government negotiator set as his goal to reduce the price by 20 percent and did not have a logical reason for the reduction, the negotiations would most likely end in a stalemate with the government not fulfilling its needs. Thus, High Expectations are valuable in aiding the negotiator only when they are based on logic and when the negotiator has the self-confidence to take positive actions to meet his high expectations.

Rational. The literature used the term "Judgment" to mean the same as the trait Rational in this study. In this context, the literature asserted that judgment is the key ingredient in the recipe for negotiating excellence (11:149). The selected sample essentially agreed with the literature that rational behavior was a key factor in attaining negotiating excellence. As such, the experts ranked Rational number 3, .26 units less than the number one ranked trait. Some typical condensed comments offered by the experts about Rational were:

1. This is what it is all about.
2. One of the top three.
3. Use of a reasonable, logical approach is a must.

For your opponent to disagree with such an approach makes him appear unreasonable.

Rational is closely aligned with the ideas espoused in Self-confidence--that is, if a negotiator is to

effectively use his self-confidence for the good of the government, his strategy and expectations must be rational; otherwise, dysfunctions will occur in the negotiation process.

Authority and Status. The literature reported that bargaining skill becomes less important as more power is acquired (9:20). It further implied that the negotiator needs to have authority/status if his negotiating position is to be strong (9:20).

The sample of experts used in this research tend to agree that Authority or the degree to which the negotiator can on his own change or make decisions that pertain to the contract is important. Authority was ranked number 8, .63 units less than the number one ranked trait. Some typical condensed comments offered by the sample were:

1. There is no consistent application of authority in ASD.
2. No authority merely means we're a hollow mouth piece of the system.
3. This is important because it upgrades the authority of the negotiator in the eyes of the other negotiating team.

In essence, the contract negotiators within ASD believe that Authority is important to have when negotiating government contracts. However, they also feel that they do not possess adequate Authority/Status commensurate with their

many responsibilities. This was evident when reviewing selected comments offered under question 19, Status.

1. Negotiators as such have very little real rank or opinion.
2. ASD negotiators have little respect with little authority.
3. Elevation of a negotiator's status could lend importance and increased credibility to proceedings.

In essence, these comments seem to infer that expert negotiators within ASD are hampered in negotiation sessions by not having as much Authority/Status as the contractors' negotiators.

Experience. Nierenberg stated that experience is desirable but also a slow empirical process that can never lead to a broad knowledge of any subject (15:86).

The sample of expert negotiators used in this research rated experience as number 6, .56 units less than the number one ranked trait. These experts felt that the amount of practical knowledge gained through personal participation in actual negotiations was important but as stated in the comments: "Everyone has to start without experience." However, the relatively high ranking by the experts implies that experience is more important to them than the literature suggested it would be.

Education. The literature suggested that executives were least concerned with their negotiators' formal

education (9:23). In general, the literature did not report that a college degree enabled the negotiator to more successfully negotiate a contract. The experts within the ASD sample tended to agree with the literature and ranked Education number 21, 2.59 units less than the number one ranked trait. Typical condensed comments concerning Education were as follows:

1. Knowledge is more important than education--there is a difference.

2. Although a college degree is desirable, a logical, common sense approach to plan and effectively utilize available expertise far outweighs the requirement for formal education.

3. Education provides some status and some academic disciplines to aid in developing and supporting negotiation positions. However, it is not a requisite to being a successful negotiator.

In summary, seven of the most provocative traits/influences were individually discussed. It is evident that the literature and the sample participating in this study essentially agree in substance but not in degree in six of the seven traits/influences discussed. Patience was the only trait in which the literature and the sample responses diversified widely. What is not evident is why the Air Force does not recognize the importance of background variables other than education and experience when selecting contract

negotiators. Bearing in mind the ideas presented in the discussion, certain conclusions about the research effort can now be drawn.

Conclusions

The culmination of this entire effort centers on the research question: What are the most important background variables of an Air Force contract negotiator? Four conclusions are presented here.

The first conclusion drawn from this study specifically addresses and answers the research question. Based on the literature review and the tabulated results acquired using the Delphi methodology, twenty-seven background variables were identified and rank-ordered in terms of importance to the selected contract negotiators within ASD. The rank order resulted in a continuum of arithmetic means ranging from .89 to 4.63. Using a criterion of 4.00 and above as being most important, the findings of this empirical research suggested the following nine background variables to be most important to the invited sample:

1. Self-confidence
2. Integrity
- Adaptability } tie
3. Rational
4. Realistic
5. Verbal Skill
6. Experience
7. Self-control
8. Authority

Second, the Air Force takes a narrow view of the selection criteria used to identify contract negotiators.

Education and experience are currently cited as the necessary and sufficient prerequisites to become an Air Force negotiator. Contrasting the Air Force view of negotiator selection with the information collected in the literature and this empirical study, several discrepancies become apparent. For example, the Air Force only addresses one dimension of the Ideal Negotiator Model presented in Chapter I--Influences. A contention of the researchers is that the Air Force should be taking a systems view of the Ideal Negotiator Model. The systems view should recognize all three dimensions presented in the Ideal Negotiator Model to include traits, influences, and planning ability. Although the Ideal Negotiator Model describes a theoretical systems concept of many background variables, the majority of traits/influences presented in the model can be measured quantitatively by the administration of psychological/aptitude tests. These tests should be administered to potential contract negotiators to determine if any serious discrepancy, i.e., lack of self-confidence, integrity or rationality, is disclosed. If any psychological discrepancies are identified by the testing procedure, the individual could then be eliminated as an Air Force contract negotiator candidate. Thus, the data suggests that the Air Force should move away from using the traditional concepts of education and experience when selecting negotiators. Instead, an overall systems viewpoint of the background variables in the Ideal

Negotiator Model is thought to be more effective and should be used in selecting Air Force contract negotiators.

The third conclusion indicated from the results is that the Air Force should selectively reduce many of the subsidiary duties and responsibilities of their contract negotiators. From a current organizational standpoint, the Air Force's negotiating team consists of people with numerous job responsibilities; as such, negotiation only seems to be a corollary to their other duties and responsibilities. Based on the responses found in the Comments Section of the trait Planning Ability, active ASD negotiators express that ". . . we never have time to thoroughly plan because of our numerous job responsibilities." Therefore, it can be concluded that the Air Force should examine the possibility of elevating negotiators to a professional status composed of people whose sole responsibilities involve negotiating major government contracts. Such an elevation of status might occur if the Air Force Specialty Codes (AFSCs) within the procurement career field were differentiated further to create a distinct negotiator specialty. Accordingly, government negotiators ostensibly would then have time to conduct extensive planning, develop more expertise, and become "skilled negotiators."

The final conclusion centers on the appropriateness of the Delphi methodology as modified in this study. The Delphi procedure was selected as the data collection method

because it appeared to offer the best opportunity for securing candid responses and obtaining an accurate consensus opinion. At the conclusion of this research it seemed clear that the use of Delphi was appropriate for this exploratory type of research effort. It was felt that the Delphi was successfully employed to give an accurate consensus opinion of relative importance of negotiator background variables. The accuracy of consensus opinion was confirmed by the insignificant changes of responses to each question from iteration one to iteration two. Such a confirmation would not have existed if a single questionnaire had been used. Also, the candid, normative responses as seen by the comments were attributable to the use of the Delphi procedure. Further, it was correct to begin the Delphi with a structured questionnaire rather than with topical areas for discussion; i.e., the "blank sheet of paper" characteristic of the classical Delphi. This was evidenced by the small number of valid additional traits/influences received from the open-ended questions in iteration one. Thus, the structured questionnaire provided the major stepping stone for iteration two and allowed for the convergence of opinions to be obtained and checked in two iterations.

Recommendations

The recommendations supported by this research effort center on two issues:

1. Similar research be conducted at other research sites.

2. Future research establish a more balanced sample size between military and civilian Air Force contract negotiators.

First, in addressing such a broad subject as traits and influences important to the Air Force contract negotiator, the authors have been able to provide only limited coverage of the subject area due to time constraints and limited data collection. As was previously pointed out, the generalization of the results to a population larger than the invited sample should be done with caution. However, if Rule's contention that: "The art of conducting negotiations is one of the most important human functions in the world today . . . and one of the least understood [18:A-1]" has any validity, then the concept of negotiation should focus on the interaction of those people who conduct the negotiation. The authors suggest that the human variables of the negotiation process should be considered the most critical element. In order to obtain a better grasp of these human variables, it is necessary to establish a broader data base. Therefore, additional research should be conducted within the Space and Missile Systems Organization (SAMSO) and the Electronic Systems Division (ESD) to acquire a broader data base and to determine if the results of this research can be replicated. If the results

are similar, a credible reason might then be established to show cause for changing the present Air Force selection criteria of its contract negotiators. To insure comparability between the research results, follow-on research should use the same twenty-seven traits/influences developed in this research as its point of departure. The methodology also permits the researchers to obtain comments on the respondents' initial answers plus the respondents' comments on the feedback. These types of comments are extremely beneficial in trying to analyze why a certain background variable was given a certain score.

Second, the number of civilians in the invited sample outnumbered the military by 37 to 5. This imbalance did not provide a credible position to compare the responses between military and civilian negotiators. However, a tentative comparison was made by the researchers. The result was the development of a definite trend of how the military as compared to civilian negotiators responded to certain questions. This very limited comparison showed the military to be more idealistic and the civilians more realistic. Since the number of military respondents was so small this finding could not be formally presented; however, the tentative findings did point to a need for a more balanced sample of civilian and military negotiators so that comparison could be made. Due to the results of the tentative comparison, it is recommended that the sample be structured so

that comparisons could be made between the military and civilian answers. It should be noted, however, that this does not imply equal sample sizes. This caveat is due to the larger number of civilians in the negotiation field than military. If equitable sizes were selected the concept of using only experts to answer the questionnaire would most likely result in too small a sample size or the use of less than expert military negotiators to answer the questionnaire.

APPENDIX A
FIRST ITERATION QUESTIONNAIRE

DEPARTMENT OF THE AIR FORCE
AIR FORCE BUSINESS RESEARCH MANAGEMENT CENTER (HQ USAF)
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433



19 April 1976

SUBJECT: Research Survey Cooperation

1. This office is operating under a charter to make improvements to the acquisition process as outlined in AFR 20-5. In fulfilling this charter, we are sponsoring a research project by Captains Theodore J. Novak, Jr. and Russell V. Whitley, Air Force Institute of Technology, School of Systems and Logistics, who are attempting to identify the background variables of selected Air Force contract negotiators. You have been selected to respond to this survey by your management due to your recognized competence in your field. This research survey has been cleared for use within the Air Force and carries the survey control number 76-120.

2. Your response is requested by 3 May 1976. If you find that you are unable or unwilling to respond, it is professional courtesy to return the blank form to the researcher. This allows the researcher to know precisely his "percentage of sample responding" and allows him to start his analysis. Specifically, this survey instrument is to be filled out with respect to your negotiation experience and then mailed directly to Captains Novak and Whitley in the enclosed envelope.

3. The survey should take about thirty minutes of your time. I realize your time is limited and valuable. However, your contribution to research will assist us in gaining important knowledge and pave the way for future improvements. Your attention is invited to the statement regarding the applicability of the Privacy Act of 1974 included within this package. Any questions you may have regarding this survey may be directed to Mr. Jim Shaffer, Technical Assistant, Deputy for Procurement and Production, Hq ASD, extension 53323, or the undersigned at the Air Force Business Research Management Center, extension 72851.

Thomas J. Michalowski
THOMAS J. MICHALOWSKI
Major, USAF
Deputy Director

1 Atch
Survey

PRIVACY ACT STATEMENT

In accordance with paragraph 30, AFR 12-35, the following information is provided as prescribed by the Privacy Act of 1974:

- a. This survey information is authorized for solicitation under Title 10, United States Code, Section 8012; Executive Order 9397; DOD Instruction 1100.13; and AFR 178-9.
- b. The purpose of this study is to identify variables of selected Air Force contract negotiators.
- c. Response to this survey will be analyzed to establish effective policy guidance for the selection of contract negotiators.
- d. Furnishing the information is entirely voluntary.
- e. No adverse action may be taken against any person who elects not to complete this survey.

Instructions

The following questions are similar to a managerial job evaluation. A list of potentially important traits and influences for negotiators is included. However, the best sources of information are the people currently serving as Air Force contract negotiators.

This questionnaire is the first of three rounds you will be asked to complete, and should take approximately 30 minutes to complete. The second and third rounds will provide additional anonymous consensus information to you based on the previous round. Since anonymity is also necessary on your part, we request you refrain from discussing your participation with other ASD contract negotiators. Each subsequent round should take no more than 30 minutes time to complete.

Please mark an X in the appropriate box following each question which best reflects your opinion of the importance of the attribute to a successful ASD negotiator. A blank space is provided after each question in which you may, at your option, explain your reason(s) for evaluating the attribute as you did.

Following question 25 is a blank space in which you can describe additional traits or influences which have been omitted in the questionnaire and which you feel are important.

TRAITS AND INFLUENCES

1. PATIENCE--The ability of the negotiator to calmly tolerate delay tactics used by his opponent and to tolerate his own peoples' shortcomings in the negotiation process.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

2. SELF-CONFIDENCE--The belief of the negotiator in his own abilities as to being able to successfully negotiate the contract or his part of the contract.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

3. SELF-CONTROL--The ability of the negotiator to control his emotions during the negotiation process.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

4. INTEGRITY--The degree to which the negotiator presents all facts honestly and completely and does not present half-truths or false information to better his position.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

5. RATIONAL--The ability of the negotiator to reason or think through his views versus his opponents' views and to arrive at a logical and best conclusion.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

6. EMPATHY--The ability of the negotiator to emotionally identify with his opponents' position in the negotiation and to give him a fair contract.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

7. GOOD LISTENER--The attentiveness of the negotiator to hear out his opponent and to completely understand what his opponent is saying.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

8. VERBAL SKILL--The ability of the negotiator to communicate exactly his thoughts to his opponent in a manner that is receptive to the opponent.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

9. DELIBERATE--The ability of the negotiator not to be pressured into closing a contract swiftly without looking into all facets of the contract.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

10. PERSUASIVE--The ability of the negotiator to cause or convince his opponent to believe something.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

11. PLANNING ABILITY -- The degree to which the negotiator carefully preplans his course of action before the actual negotiation.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

12. EDUCATION--The degree to which college education (i.e., Baccalaureate degree, Master's degree, etc.) enables the negotiator to more successfully negotiate a contract.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

13. EXPERTISE--How well the negotiator knows the product or service that he is negotiating to purchase.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

14. AUTHORITY--The degree to which the negotiator can on his own change or make decisions that pertain to the contract.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

15. HIGH EXPECTATIONS--The degree to which the negotiator is confident that he can achieve his present negotiation goals.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

16. SKEPTICISM--The ability of the negotiator to question information presented to him to insure that he is getting the truth.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

17. REALISTIC--The ability of the negotiator to face facts and to use these facts to reach an agreement on a position.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

18. SELF-ESTEEM--The degree to which a negotiator respects himself to be equal or better than his opponent.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

19. STATUS--The ability of the negotiator to influence the negotiation process by virtue of his rank or hierarchial position in the organization.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

20. SENSE OF TIMING--The ability to know when to invoke certain strategies to gain advantage of his opponent.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

21. BELIEFS--The experiences of a person's past (i.e., religious convictions, marital status, etc.) that might influence a negotiator's performance.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

22. TACTFULNESS--The ability of the negotiator to say something to his opponent or his coworkers without offending them.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

23. EXPERIENCE--The amount of practical knowledge gained through personal participation in actual negotiations.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

24. ADAPTABILITY--The ability of the negotiator to react (i.e., to think on his feet) to the changing circumstances of the on-going negotiation process.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

25. ACADEMIC DISCIPLINE--The extent to which the type of college education (i.e., Business Administration, History, Philosophy, Engineering, etc.) enables the negotiator to more successfully negotiate a contract.

0

1

2

3

4

5

Low
Importance/
No Influence

Desirable

Important

Vital

COMMENTS:

26. The list of traits and attributes presented in statements 1 through 25 is by no means complete, or exhaustive. Undoubtedly there are characteristics we have overlooked. Can you suggest any additional traits or influences that you believe were important for your success in negotiating contracts?

(1) _____

DESCRIPTION

(2) _____

DESCRIPTION

(3) _____

DESCRIPTION

(4) _____

DESCRIPTION

(5) _____

DESCRIPTION

APPENDIX B
LIKERT SCALING FOR INTERNAL CONSISTENCY

AD-A032 362

AIR FORCE INST OF TECH WRIGHT-PATTERSON AFB OHIO SCHO--ETC F/G 5/1
IDENTIFICATION OF PERSONAL CHARACTERISTICS OF AIR FORCE CONTRAC--ETC(U)
SEP 76 T J NOVAK, R V WHITLEY
SLSR-32-76B

UNCLASSIFIED

2 OF 2

AD
A032362



NL



END

DATE
FILMED
1-77

APPENDIX B

LIKERT SCALING FOR INTERNAL CONSISTENCY (12)

The Likert scaling technique is used to measure if the individual questions elicit differing responses. To accomplish this technique the different responses for each respondent are totaled. The totaled scores are then rank ordered from the highest to lowest totals. A group equal to 10 percent of the total respondents is then taken from the highest respondents and also from the lowest respondents. The individual questions from both the high group and the low group are tabulated. The low totals are then subtracted from their respective high totals. These differences are divided by the sample number. The results are rank ordered with the low number rank ordering indicating a highly differentiating question with the reverse being true of high number rank ordering questions.

The chart on the following page indicates the result of this technique as applied to the responses of the first iteration questionnaire. The most differentiating questions are numbers 11 (Planning Ability), 15 (High Expectations), and 25 (Academic Discipline). The least differentiating questions are numbers 19 (Status) and 21 (Beliefs).

LIKERT SCALING FOR INTERNAL CONSISTENCY

		QUESTION																									
	INDIVIDUAL NO. SCORE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
HIGH GROUP	1	108	4	5	5	5	5	5	5	5	5	5	3	4	4	5	5	5	5	0	5	0	5	4	5	4	
	29	101	4	4	4	5	4	5	5	4	4	4	3	3	5	4	4	5	5	3	4	3	3	3	5	4	
	40	100	5	5	5	4	4	4	4	4	4	4	3	4	4	4	4	4	3	5	4	2	3	4	4	4	
	17	99	4	5	4	5	1	5	5	5	4	5	0	3	5	5	5	5	5	2	4	0	4	5	5	3	
SUM		17	19	18	19	14	19	19	18	17	18	9	14	18	18	18	18	19	18	10	17	5	15	16	19	15	
LOW GROUP	4	72	2	3	3	3	2	3	3	3	4	3	3	3	1	5	3	5	3	5	4	3	1	2	4	3	3
	25	70	4	3	4	4	3	3	3	3	2	3	1	3	2	1	2	5	2	1	3	2	4	4	4	1	
	23	66	2	5	5	4	4	5	5	3	5	3	1	0	1	3	2	3	3	0	1	0	2	1	4	1	
	41	64	3	4	2	2	2	3	3	3	3	2	1	2	3	3	3	3	3	4	3	1	3	2	3	1	
SUM		11	15	14	13	12	12	14	12	14	12	9	5	7	13	9	13	14	13	9	10	4	11	11	14	6	
DIFFERENCE: HIGH SUM-LOW SUM		6	4	4	6	7	2	5	7	4	5	9	4	7	5	9	5	5	5	1	7	1	4	5	5	9	
DIFFERENCE DIVIDED BY SAMPLE NUMBER (4)		1.5	1	1	1.5	1.75	.5	1.25	1.75	.1	1.25	2.25	1	1.75	1.25	2.25	1.25	1.25	1.25	.25	1.75	.25	1	1.25	1.25	2.25	
RANK ORDER		8.5	20	20	8.5	5.5	23	13.5	5.5	20	13.5	2	20	5.5	13.5	2	13.5	13.5	13.5	24.5	5.5	24.5	20	13.5	13.5	2	

APPENDIX C
SECOND ITERATION QUESTIONNAIRE

DEPARTMENT OF THE AIR FORCE
AIR FORCE BUSINESS RESEARCH MANAGEMENT CENTER (HQ USAF)
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433



11 May 1976

SUBJECT: Research Survey Cooperation

1. The attached questionnaire is the second round of the research survey mailed to you last month dealing with the background variables of Air Force contract negotiators. The number and quality of responses to the first round is greatly appreciated. The overall responses to each question are summarized for you within the context of the questionnaire. Your continued participation in this research project is solicited in order to attain a consensus view of the background variables. As noted in the previous questionnaire cover letter dated 19 April 1976, the survey has been cleared for use within the Air Force and carries survey control number 76-120.

2. Your response is requested by 21 May 1976. If you find that you are unable or unwilling to respond, it is professional courtesy to return the blank form to the researcher. This allows the researcher to know precisely his "percentage of sample responding" and allows him to start his analysis. Specifically, this survey instrument is to be filled out with respect to your negotiation experience and then mailed directly to Captains Novak and Whitley in the enclosed envelope.

3. The survey should take about thirty minutes of your time. I realize your time is limited and valuable. However, your contribution to research will assist us in gaining important knowledge and pave the way for future improvements. Your attention is invited to the statement regarding the applicability of the Privacy Act of 1974 included within this package. Any questions you may have regarding this survey may be directed to Mr. Jim Shaffer, Technical Assistant, Deputy for Procurement and Production, Hq ASD, extension 53323, or the undersigned at the Air Force Business Research Management Center, extension 72851.

Thomas J. Michalowski
THOMAS J. MICHALOWSKI
Major, USAF
Deputy Director

1 Atch
Survey

PRIVACY ACT STATEMENT

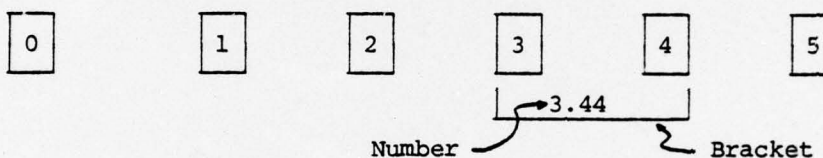
In accordance with paragraph 30, AFR 12-35, the following information is provided as prescribed by the Privacy Act of 1974:

- a. This survey information is authorized for solicitation under Title 10, United States Code, Section 8012; Executive Order 9397; DOD Instruction 1100.13; and AFR 178-9.
- b. The purpose of this study is to identify variables of selected Air Force contract negotiators.
- c. Response to this survey will be analyzed to establish effective policy guidance for the selection of contract negotiators.
- d. Furnishing the information is entirely voluntary.
- e. No adverse action may be taken against any person who elects not to complete this survey.

Instructions

The following questionnaire is the second of three rounds you will be asked to participate in and should take you approximately 30 minutes to complete. Round One has been tabulated and two additional traits and influences are included to be evaluated. Again, additional anonymous consensus information will be provided to you as a result of Round Two. Since anonymity is also necessary on your part, we request you refrain from discussing your participation with other ASD contract negotiators.

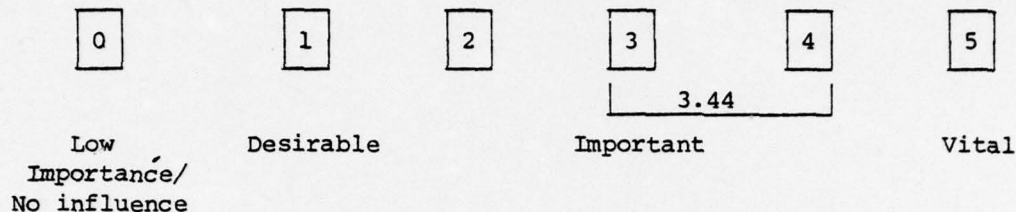
Please mark an X in the appropriate box following each question which best reflects your opinion of the importance of the attribute to a successful ASD negotiator. NOTICE that the boxes will now include two extra items; i.e., a bracket and a number inside the bracket. For example:



The bracket represents the fact that at least 50 percent of the respondents answered the question within the range of the bracket (block 3 or 4 in this example). The number within the bracket (3.44 in this example) represents the mean response of all participants on that particular question. Also, first questionnaire comments are provided to you in context as "food for thought" items that may or may not help you in responding to the question. If your answer does not fall within the bracketed area, a comment section is provided after each question in which you may, at your option, explain your reason(s) for evaluating the attribute as you did.

TRAITS AND INFLUENCES

1. PATIENCE--The ability of the negotiator to calmly tolerate delay tactics used by his opponent and to tolerate his own peoples' shortcomings in the negotiation process.

COMMENTS:FIRST QUESTIONNAIRE COMMENTS:

"however patience ceases to be a virtue when it wastes time and money."

"You have asked 2 separate questions. You haven't defined shortcomings, this can make a big difference in the answer."

"Very important."

"I believe it is very important to tolerate your own people's shortcomings but not necessarily your opponents. Therefore, I have marked the average."

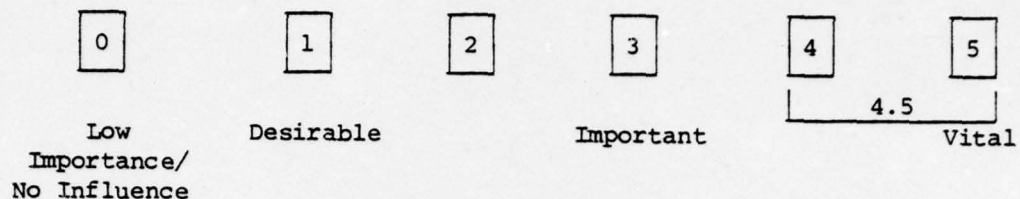
"Tolerance does not imply complacency with such activity. Skill in group management is attendant to this type of patience."

"Must exhibit patience in dealing with reasonable delays. Patience and tact must be balanced in dealing with your own team."

"Patience is very important but more important is to be able to sense when a show of impatience is required to get the job done."

"This is important but not vital because many times it is not a factor, but in the instances cited above it would be a virtue."

2. SELF-CONFIDENCE--The belief of the negotiator in his own abilities as to being able to successfully negotiate the contract or his part of the contract.



COMMENTS:

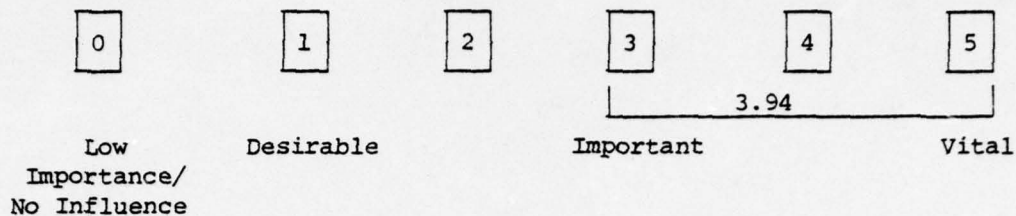
FIRST QUESTIONNAIRE COMMENTS:

"In my observations this trait is always present in what I would consider experts."

"Of prime importance. You cannot do a job well if you feel it is beyond your capabilities."

"Not absolutely essential. I have seen instances when over-confidence caused a negotiator to be sufficiently well prepared."

3. SELF-CONTROL--The ability of the negotiator to control his emotions during the negotiation process.



COMMENTS:

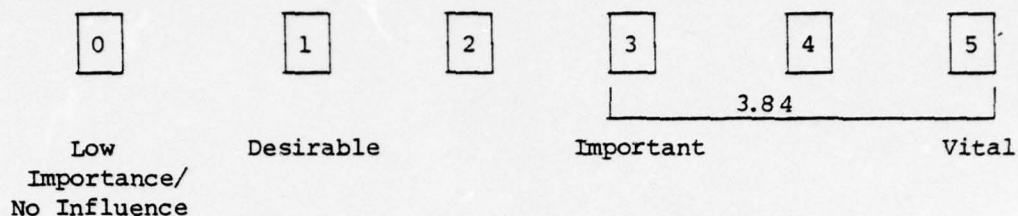
FIRST QUESTIONNAIRE COMMENTS:

"Not necessarily a counterproductive trait."

"Emotions may be used to advantage in certain negotiation techniques, but to lose control of your emotions is to lose control of your negotiations."

"I consider this vital. To become emotional can 'blow' the whole negotiation. A little emotion in the right place is effective, but self-control is essential."

4. INTEGRITY--The degree to which the negotiator presents all facts honestly and completely and does not present half-truths or false information to better his position.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"I have noticed many of our people work for negotiating position--silly."

"This is by far the most important trait!"

"the question is answered in terms of integrity--the def presented is not considered integrity."

"one of the top three."

"Definitely no false information, half-truths O.K. sometimes as the occasion dictates."

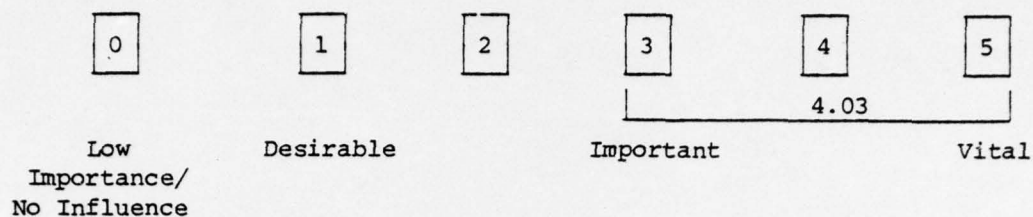
"Perhaps certain info is to be with-held or skillfully presented. Presently misleading info cannot be tolerated. You must earn the respect of your advisory."

"Absolutely essential. Very little can be accomplished by a negotiator who has lost integrity in the view of those with whom he or she must negotiate."

"However, must be able to be a poker player so to speak, don't babble the truth."

"Half-truths/false info will normally only be useable if the negotiators on the other side lack the requisite skills of their profession, even then, they can be detrimental. For example, if they info results in unrealistic targets on an incentive contract."

5. RATIONAL--The ability of the negotiator to reason or think through his views versus his opponents' views and to arrive at a logical and best conclusion.



COMMENTS:

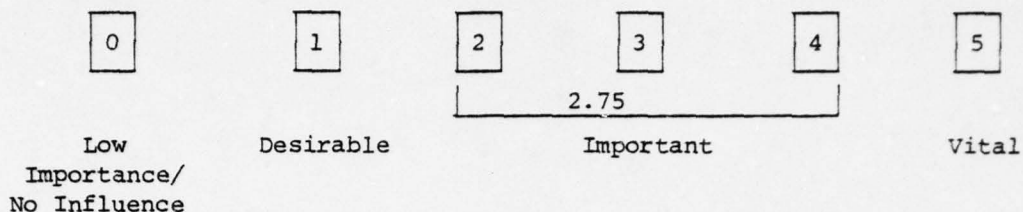
FIRST QUESTIONNAIRE COMMENTS:

"This is what it is all about."

"one of the top three."

"Use of a reasonable, logical approach is a must. For your opponent to disagree with such approach makes him appear unreasonable."

6. EMPATHY--The ability of the negotiator to emotionally identify with his opponents' position in the negotiation and to give him a fair contract.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"There are two questions--each answered separately."

"I question the use of the word 'emotionally'--I do believe each negotiation should result in fair and reasonable contract."

"A fair contract is always an objective but very illusive. Empathy is very helpful in explaining opponents behavior and structuring responses to his behavior."

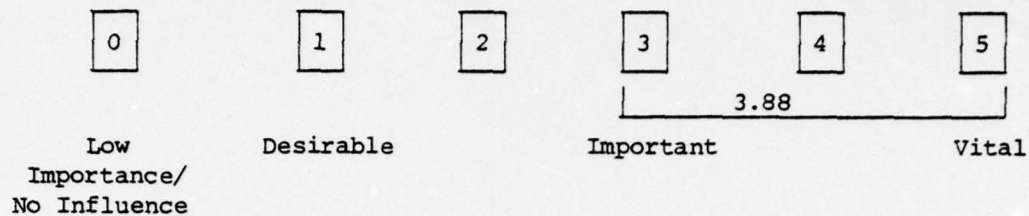
"We are looking after the Govt's best interest first. The contractor is generally quite capable of taking care of himself."

"It is vital that one understands the opponent's position and sometimes show understanding but this does not mean the negotiator gives in if the position is not fair and reasonable to both parties. For example interest on borrowed money cannot be recognized as an acceptable expense (ASPR Sec 15) but one can sympathize with contentions that it is a real cost."

"Valuable but not vital."

"I don't rate it higher (3) because the opponent should be able to look out for himself to some degree. But, putting oneself into his opponents position can be very enlightening to understanding one's own position."

7. GOOD LISTENER--The attentiveness of the negotiator to hear out his opponent and to completely understand what his opponent is saying.



COMMENTS:

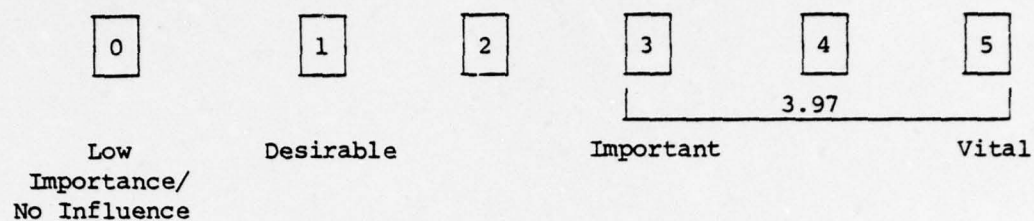
FIRST QUESTIONNAIRE COMMENTS:

"Must be a good listener to be reasonable. Reasonableness is necessary to command respect."

"This is very essential because if one is not a good listener a concession or counter offer can go unnoticed."

"It is difficult to counter an opponent's point without understanding it in the first place."

8. VERBAL SKILL--The ability of the negotiator to communicate exactly his thoughts to his opponent in a manner that is receptive to the opponent.

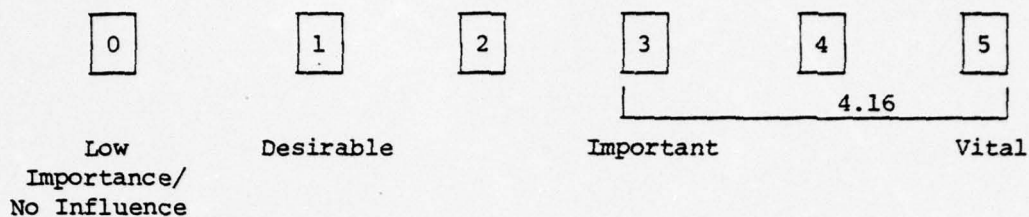


COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"I would have rated this "vital" if you'd substitute the words 'what he wants to communicate' for 'his thoughts.'"

9. DELIBERATE--The ability of the negotiator not to be pressured into closing a contract swiftly without looking into all facets of the contract.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"pressure by whom?"

"we are not master's of our destiny in every case--Deadlines mean more at award time. Its only later that we then get critized for a sloppy job."

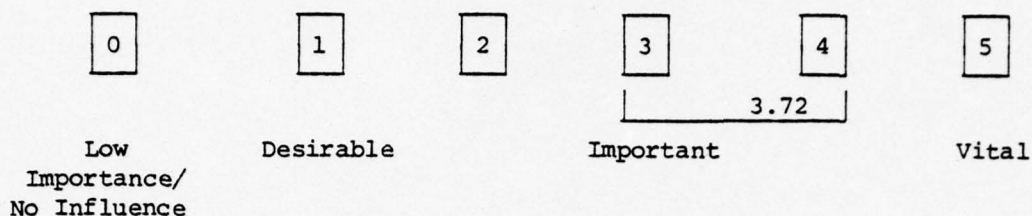
"More vital with our people than contractor."

"It is better not to act in haste and repent at leisure."

"Yielding to pressure can compound what might otherwise be a minor problem."

"The negotiator must realize that the contract is a means to an end. All factors of time and pressures must be recognized."

10. PERSUASIVE--The ability of the negotiator to cause or convince his opponent to believe something.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

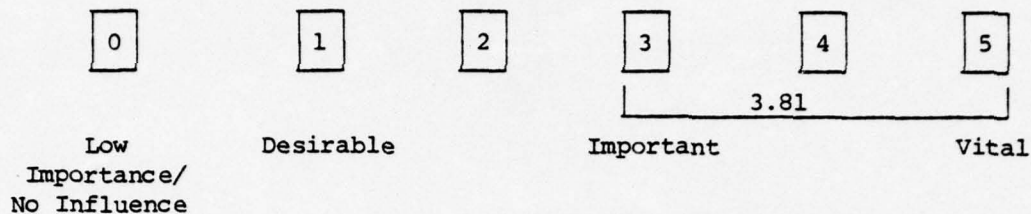
"a lot of times the contractor does not have the authority to close the deal, therefore, efforts to be persuasive fall on deaf ears."

"Persuasiveness is assisted by integrity, rational approach and verbal skill."

"I do not consider this vital because many times it is not necessary to 'sell' or 'convince.'"

"I assumed this meant the 'personal' persuasiveness of the individual. This factor varies directly with the support available for a position."

11. PLANNING ABILITY -- The degree to which the negotiator carefully preplans his course of action before the actual negotiation.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"we never have time for this."

"important, but tends to be a detriment when not utilized in 'flexible' manner."

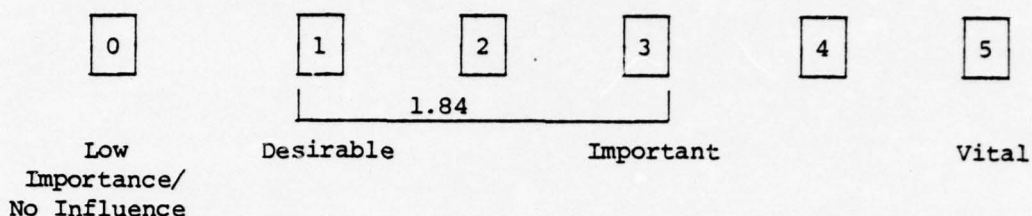
Especially in the areas of understanding an opponents proposal and his own requirements."

"Laying the blueprint is necessary just as planning carefully for any exercise is important. However, adjusting these plans as negotiation progresses is equally important."

"This is essential, but many times too much preplanning can be a waste because once negotiations commence the situation may change. One must be prepared."

"Preplanning is good, but should recognize that during negotiations changes can occur that could totally negate a preplanned course of action. It's important to identify alternatives."

12. EDUCATION--The degree to which college education (i.e., Baccalaureate degree, Master's degree, etc.) enables the negotiator to more successfully negotiate a contract.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"depends on the individual. Education is great. The application of the education to the job is the important aspect. Without practical application the degree of education is unimportant."

"however it is nice to have because it broadens the base of B.S. you can talk about during breaks!! Knowledge more important than education--there is a difference."

"Although I consider a college degree extremely desirable, I think a logical, common sense approach to plan and effectively utilize available expertise far outweighs the requirement for formal education."

"ability of the individual is more important than the number of hours he sat in a classroom."

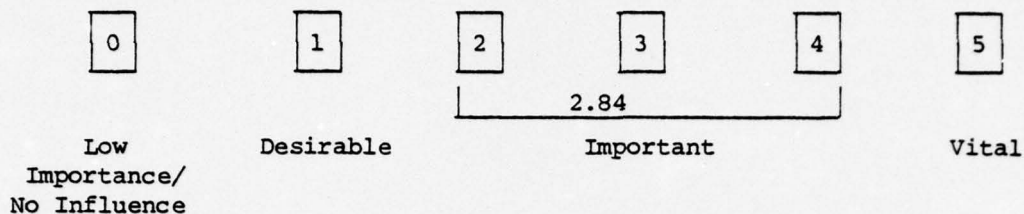
"Higher education may enhance a person's capabilities but will never by itself make a negotiator."

"Must be balanced with experience."

"The more education and experience one has the better chance of success one has; however, any negotiator knows a degree alone does not assure success."

"Provides some status and possibly some academic disciplines to aid in developing and supporting negotiation positions. I do not feel it is a requisite to being a successful negotiator."

13. EXPERTISE--How well the negotiator knows the product or service that he is negotiating to purchase.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

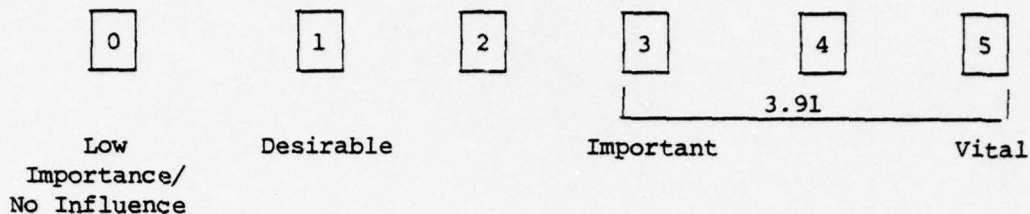
"helps 'snow' your counterpart."

"Must have knowledge of product you are buying or you cannot communicate with the contractor."

"A good familiarity is helpful. Usually, a true expert can be available to assist in technical areas. No one person could have sufficient expertise to compete in technical discussions with individuals who work in the area everyday."

"Expertise should also cover the negotiator's technical skills, i.e. training and understanding of cost and pricing techniques, RIE calculations, burden determination allocability, etc."

14. AUTHORITY--The degree to which the negotiator can on his own change or make decisions that pertain to the contract.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

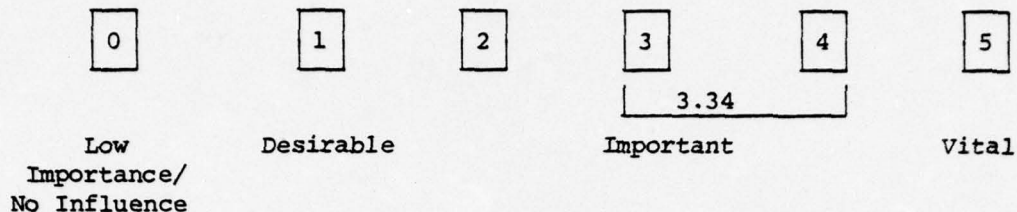
"There is no consistent application of this authority in ASD."

"No authority merely means we're a hallow mouth piece of the system."

"A certain amount of respect always goes with authority exercised prudently."

"This is important because it upgrades the authority of the negotiator in the eyes of the other negotiating team."

15. HIGH EXPECTATIONS--The degree to which the negotiator is confident that he can achieve his present negotiation goals.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"I consider this important only that I believe that the contract negotiator should not establish an arbitrary objective--but one that is well substantiated and can be considered reasonable. I believe it is extremely important that the contractor understands that our position is based upon a logical and reasonable basis. When this is not the case, I believe the contractor has either or no respect for the contractor has either or no respect for the government representatives."

"And his ability to transmit/communicate his expectations to his opponent."

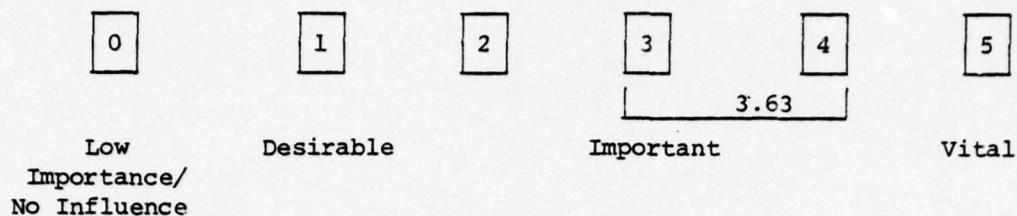
"Negotiator must remain flexible."

"Optimism nurtures success which pessimism breeds failure."

"Be realistic, can't afford to get hung up on a 'principle.' Negotiator's job is to arrive at agreement."

"Varies with degree of subjectivity/objectivity of the position. It is a symptom of the circumstances and available info. This is more a function of how realistic the negotiator has been in setting his goals. It is important to establish goals that are realistic, fair and reasonable so one can have high expectations of achievement."

16. SKEPTICISM--The ability of the negotiator to question information presented to him to insure that he is getting the truth.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"could be better called 'analytical capability.'"

"on a reasonable basis."

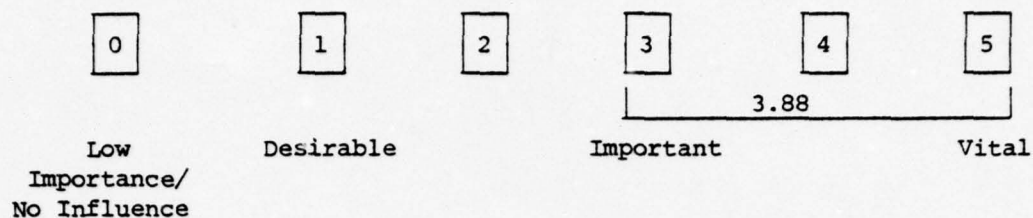
"fact finding is one of the most important."

"This skepticism should be almost mechanical and include assignment of coefficients of confidence to each piece of info."

"A healthy amount of skepticism is good, but too much can needlessly delay negotiations and conceivably develop mutual mistrust if carried too far."

"Accepting things 'on faith' or making assumptions are no substitute for proper fact finding and determination based on good information."

17. REALISTIC--The ability of the negotiator to face facts and to use these facts to reach an agreement on a position.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

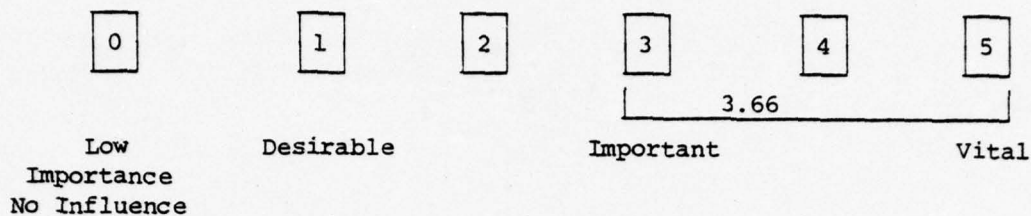
"one of the top three."

"this is better described by 'position assessment.'"

"Goes hand in hand with a rational, logical approach."

"To be stubborn in the face of facts is a waste of time and totally unprofessional."

18. SELF-ESTEEM--The degree to which a negotiator respects himself to be equal or better than his opponent.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

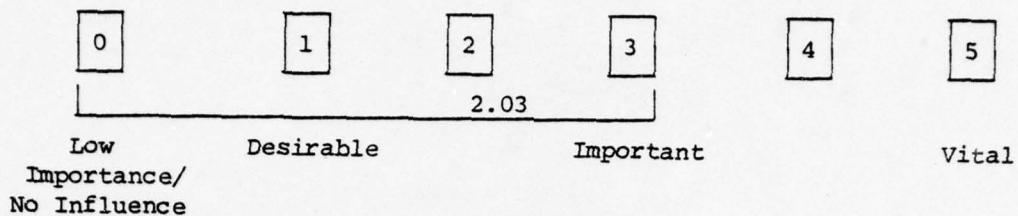
"but don't go overboard."

"however, not to the point that the government negotiator acts in either an arbitrary or overbearing manner."

"Important but often difficult to maintain when comparing your salary with that of your opponent."

"A feeling of inferiority or disadvantage can lead to "defensive" rather than "offensive" actions. This gives the edge to one's opponent."

19. STATUS--The ability of the negotiator to influence the negotiation process by virtue of his rank or hierarchial position in the organization.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

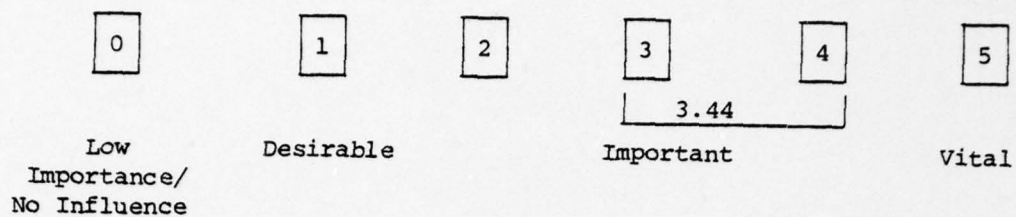
"negotiators as such have very little real rank/position."

"Probably the most overlooked element."

"Little respect with little authority."

"Can lend importance and increased credibility to proceedings."

20. SENSE OF TIMING--The ability to know when to invoke certain strategies to gain advantage of his opponent.



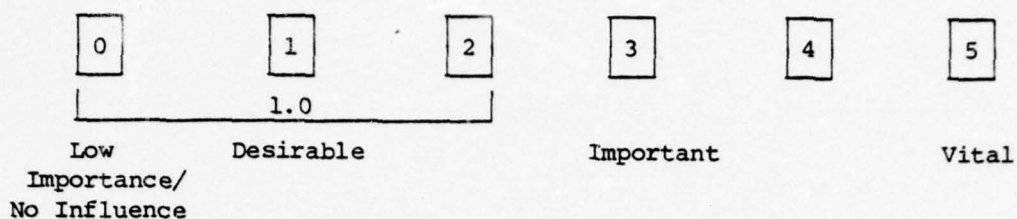
COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"we should not negotiate for advantage only for being equitable."

"'advantage of his opponent' terminology tends to worry me--perhaps I've misunderstood intent of question."

21. BELIEFS--The experiences of a person's past (i.e., religious convictions, marital status, etc.) that might influence a negotiator's performance.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"Hopefully, the negotiators past personal experiences has little or no affect on his negotiations. Negotiation should be based upon facts and logical, well thought out problems--not personal experiences.

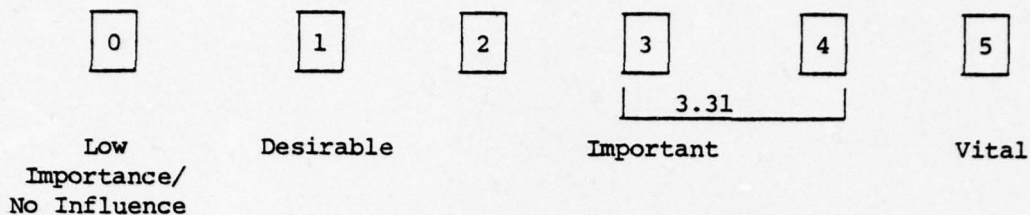
"Include these beliefs that do not support the capatalistic system."

"Happy home life contributes to a persons sense of well-being, which in turn supports productivity."

"This would be very remote unless we were dealing with a particular 'unique' individual but generally no one person would exercise that much influence. This would be vital in state department type negotiations or possibly in foreign military sales."

"These have no place in conducting proper negotiations."

22. TACTFULNESS--The ability of the negotiator to say something to his opponent or his coworkers without offending them.



COMMENTS:

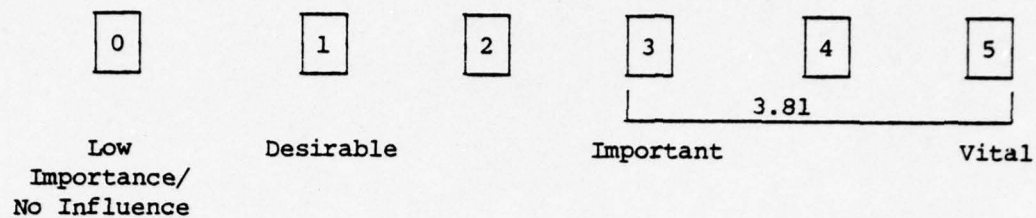
FIRST QUESTIONNAIRE COMMENTS:

"can be a tool."

"Negotiation is a team effort. Cooperation rather than dissention is needed."

"Tactfulness is highly important in dealing with people but it can be overdone. The best policy is to know the opponent or worker and play it accordingly. NEVER sacrifice honesty for tactfulness."

23. EXPERIENCE--The amount of practical knowledge gained through personal participation in actual negotiations.

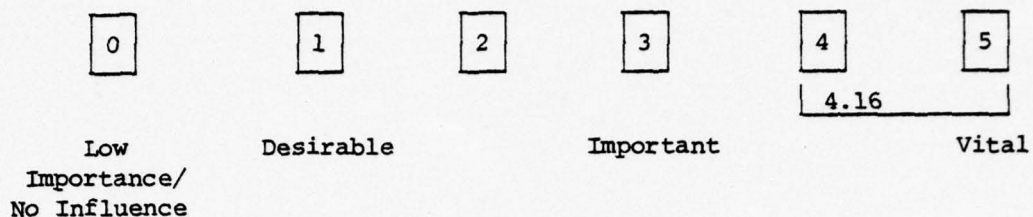


COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"Desirable, but everyone has to start without experience."

24. ADAPTABILITY--The ability of the negotiator to react (i.e., to think on his feet) to the changing circumstances of the on-going negotiation process.



COMMENTS:

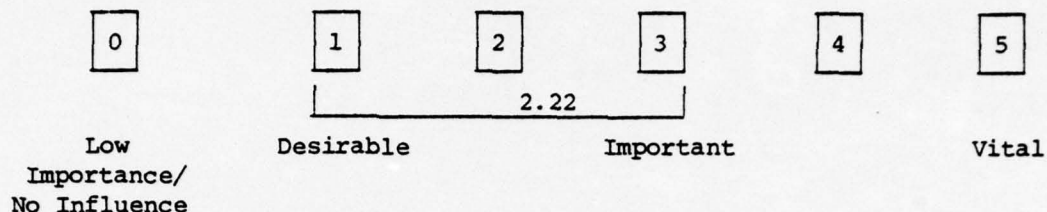
FIRST QUESTIONNAIRE COMMENTS:

"At a minimum he should know when his position is being jeopardized."

"Inflexibility is a tremendous handicap."

"This can be important depending on immediate circumstances, but sometimes its better to act by stopping negotiations temporarily (recess) than by reacting and possibly putting oneself in an untenable position."

25. ACADEMIC DISCIPLINE--The extent to which the type of college education (i.e., Business Administration, History, Philosophy, Engineering, etc.) enables the negotiator to more successfully negotiate a contract.



COMMENTS:

FIRST QUESTIONNAIRE COMMENTS:

"Philosophy??"

"Business Administration is very helpful. History and Philosophy are useless."

"The man and his personality and experience is more important."

"A background in business or law definitely would give a negotiator an advantage. Engineering would not be too helpful because of so many varied disciplines involved."

"Most important early in process of gaining negotiation experience. A business/econ type degree can give a 'new' negotiator some insight/understanding into the econ/managerial factors that drive negotiations, a psychology degree insight in personnel factors, an engr degree insight into technical factors, etc."

Many additional negotiator background variables were suggested as important by individual respondents in the first questionnaire. As a result of our tabulations of these suggestions, two additional attributes met our research criteria and are listed below. Please evaluate these two additional attributes.

26. TASK ORIENTATION--The degree to which the negotiator understands and is dedicated toward achieving procurement objectives; i.e., a fair and reasonable price for the USAF.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

27. REPUTATION--The degree to which the reputation of the negotiator for his fairness and strength in negotiating extends toward influencing the final outcomes of the negotiation.

0	1	2	3	4	5
Low Importance/ No Influence	Desirable		Important		Vital

COMMENTS:

APPENDIX D
LISTING OF ALL COMMENTS

APPENDIX D

LISTING OF ALL COMMENTS

1. PATIENCE--The ability of the negotiator to calmly tolerate delay tactics used by his opponent and to tolerate his own peoples' shortcomings in the negotiation process.

Iteration 1 Comments

(Mean 3.43; rank order 15 after Iteration 1)

however patience ceases to be a virtue when it wastes time and money.

You have asked 2 separate questions. You haven't defined shortcomings, this can make a big difference in the answer.

Very important.

I believe it is very important to tolerate your own people's shortcomings but not necessarily your opponents. Therefore, I have marked the average.

Tolerance does not imply complacency with such activity. Skill in group management is attendant to the type of patience.

Must exhibit patience in dealing with reasonable delays. Patience and tact must be balanced in dealing with your own team.

Patience is very important but more important is to be able to sense when a show of impatience is required to get the job done.

This is important but not vital because many times it is not a factor, but in the instances cited above it would be a virtue.

Iteration 2 Comments

(Mean 3.63; rank order 13 after Iteration 2)

"Cool" is the key. Oftentimes delay on your opponents part is a good indices as to the amount of consideration your opponent is giving to your counter-proposal.

2. SELF-CONFIDENCE--The belief of the negotiator in his own abilities as to being able to successfully negotiate the contract or his part of the contract.

Iteration 1 Comments

(Mean 4.49; rank order 1 after Iteration 1)

In my observations this trait is always present in what I would consider experts.

Of prime importance. You cannot do a job well if you feel it is beyond your capabilities.

Not absolutely essential. I have seen instances where overconfidence caused a negotiator to be sufficiently well prepared.

Iteration 2 Comments

(Mean 4.63; rank order 1 after Iteration 2)

Self-confidence enables a negotiator to retain control of the negotiation and control of the situation is control.

3. SELF-CONTROL--The ability of the negotiator to control his emotions during the negotiation process.

Iteration 1 Comments

(Mean 3.89; rank order 8 after Iteration 1)

Not necessarily a counterproductive trait.

Emotions may be used to advantage in certain negotiation techniques, but to lose control of your emotions is to lose control of your negotiations.

I consider this vital. To become emotional can "blow" the whole negotiation. A little emotion in the right place is effective, but self-control is essential.

Iteration 2 Comments

(Mean 4.04; rank order 7 after Iteration 2).

The proper amount of emotion in the right place can be very effective, but never at the expense of losing one's own self-control.

Some of the most "effective" negotiators in industry, as well as govt are emotional-irrational, etc.

4. INTEGRITY--The degree to which the negotiator presents all facts honestly and completely and does not present half-truths or false information to better his position.

Iteration 1 Comments

(Mean 4.11; rank order 3 after Iteration 1)

I have noticed many of our people work for negotiating position--silly.

This is by far the most important trait!

The question is answered in terms of integrity--the def presented is not considered integrity.

one of the top three

Definitely no false information, half-truths O.K. sometimes as the occasion dictates.

Perhaps certain info is to be with-held or skillfully presented. Presenting misleading info cannot be tolerated. You must earn the respect of your advisory.

Absolutely essential. Very little can be accomplished by a negotiator who has lost integrity in the view of those with whom he or she must negotiate.

However, must be able to be a poker player so to speak, don't babble the truth.

Half-truths/false info will normally only be useable if the negotiators on the other side lack the requisite skills of their profession, even then, they can be detrimental. For example, if they info results in unrealistic targets or an incentive contract.

Iteration 2 Comments

(Mean 4.37; rank order 2 after Iteration 2)

It is important that the negotiator establish integrity in the very beginning of a negotiation. Hopefully this will set the stage so that all data presented subsequently in negotiations is constructed as also being factual.

I think we better get some of people up to a higher level of integrity.

Vital to establishing credibility with the contractor.

5. RATIONAL--The ability of the negotiator to reason or think through his views versus his opponents' views and to arrive at a logical and best conclusion.

Iteration 1 Comments

(Mean 4.06; rank order 5 after Iteration 1)

this is what it is all about.

one of the top three.

Use of a reasonable, logical approach is a must. For your opponent to disagree with such approach makes him appear unreasonable.

Iteration 2 Comments

(Mean 4.30; rank order 3 after Iteration 2)

This ability keeps the issue in the negotiation process of "give and take."

6. EMPATHY--The ability of the negotiator to emotionally identify with his opponents' position in the negotiation and to give him a fair contract.

Iteration 1 Comments

(Mean 2.91; rank order 18 after Iteration 1)

There are two questions--each answered separately.

I question the use of the word "emotionally"--I do believe each negotiation should result in fair and reasonable contract.

A fair contract is always an objective but very illusive. Empathy is very helpful in explaining opponents behavior and structuring responses to his behavior.

We are looking after the Gov't's best interest first. The contractor is generally quite capable of taking care of himself.

It is vital that one understands the opponent's position and sometimes show understanding but this does not mean the negotiator gives in if the position is not fair and reasonable to both parties. For example interest on borrowed money cannot be recognized as an acceptable expense (ASPR Sec 15) but one can sympathize with contentions that it is a real cost.

Valuable but not vital.

I don't rate it higher (3) because the opponent should be able to look out for himself to some degree. But, putting oneself into his opponents position can be very enlightening to understanding one's own position.

Iteration 2 Comments

(Mean 2.56; rank order 19 after Iteration 2)

Same thing as before. Fair contract yes. "Emotionally" identify--I have reservations regarding desirability and/or need for this approach.

I believe a rating of no more than the 2.0 is adequate. I concur with the last comment--the opponent should be able to look out for himself and I am convinced he can!

7. GOOD LISTENER--The attentiveness of the negotiator to hear out his opponent and to completely understand what his opponent is saying.

Iteration 1 Comments

(Mean 3.89; rank order 8 after Iteration 1)

Must be a good listener to be reasonable. Reasonableness is necessary to command respect.

This is very essential because if one is not a good listener a concession or counter offer can go unnoticed.

It is difficult to counter an opponent's point without understanding it in the first place.

Iteration 2 Comments

(Mean 3.93; rank order 10 after Iteration 2)

I believe a rating of 3 is appropriate. We are obliged, in my opinion, as Government employees to "hear out" our opponents--not to necessarily completely understand and certainly not to believe what our opponent is saying.

This is 1/2 of the art of communication which is an absolute "must" in negotiation.

8. VERBAL SKILL--The ability of the negotiator to communicate exactly his thoughts to his opponent in a manner that is receptive to the opponent.

Iteration 1 Comments

(Mean 4.03; rank order 6 after Iteration 1)

I would have rated this "vital" if you'd substitute the words "what he wants to communicate" for "his thoughts."

Iteration 2 Comments

(Mean 4.11; rank order 5 after Iteration 2)

Negotiators understand numbers much better than words although a certain amount of words are necessary to explain numbers.

9. DELIBERATE--The ability of the negotiator not to be pressured into closing a contract swiftly without looking into all facets of the contract.

Iteration 1 Comments

(Mean 4.09; rank order 4 after Iteration 1)

Pressure by whom

we are not master's of our destiny in every case--Deadlines mean more at award time. Its only later that we then get critized for a sloppy job.

more vital with our people than contractor.

It is better not to act in haste and repent at leisure.

Yielding to pressure can compound what might otherwise be a minor problem.

The negotiator must realize that the contract is a means to an end. All factors of time and pressures must be recognized.

Iteration 2 Comments

(Mean 3.67; rank order 12 after Iteration 2)

No negotiator should be pressured, especially by his opponent.

The negotiator must realize that the contract is a means to an end. All factors of time and pressures must be recognized.

A.F. deadlines are still the rule and the pressure is there --

We have met the enemy and they is us!!

I have never seen a perfect contract.

10. PERSUASIVE--The ability of the negotiator to cause or convince his opponent to believe something.

Iteration 1 Comments

(Mean 3.77; rank order 11 after Iteration 1)

a lot of times the contractor does not have the authority to close the deal, therefore, efforts to be persuasive fall on deaf ears.

Persuasiveness is assisted by integrity, rational approach and verbal skill.

I do not consider this vital because many times it is not necessary to "sell" or "convince."

I assumed this meant the "personal" persuasiveness of the individual. This factor varies directly with the support available for a position.

Iteration 2 Comments

(Mean 3.70; rank order 11 after Iteration 2)

I prefer to see this aspect rated higher.

a lot of times the contractor does not have the authority to close the deal, therefore, efforts to be persuasive fall on deaf ears.

11. PLANNING ABILITY--The degree to which the negotiator carefully preplans his course of action before the actual negotiation.

Iteration 1 Comments

(Mean 3.83; rank order 10 after Iteration 1)

we never have time for this.

important, but tends to be a detriment when not utilized in "flexible" manner.

Especially in the areas of understanding an opponents proposal and his own requirements.

Laying the blueprint is necessary just as planning carefully for any exercise is important. However, adjusting these plans as negotiation progresses is equally important.

This is essential, but many times too much preplanning can be a waste because once negotiations commence the situation may change. One must be prepared.

Preplanning is good, but should recognize that during negotiations changes can occur that could totally negate a preplanned course of action. It's important to identify alternatives.

Iteration 2 Comments

(Mean 3.96; rank order 8 after Iteration 2)

we never have time for this.

12. EDUCATION--The degree to which college education (i.e., Baccalaureate degree, Master's degree, etc.) enables the negotiator to more successfully negotiate a contract.

Iteration 1 Comments

(Mean 1.94; rank order 21 after Iteration 1)

depends on the individual. Education is great. The application of the education to the job is the important

aspect. Without practical application the degree of education is unimportant.

however it is nice to have because it broadens the base of B.S. you can talk about during breaks!! Knowledge more important than education--there is a difference.

Although I consider a college degree extremely desirable, I think a logical, common sense approach to plan and effectively utilize available expertise far outweighs the requirement for formal education.

ability of the individual is more important than the number of hours he sat in a classroom.

Higher education may enhance a person's capabilities but will never by itself make a negotiator.

Must be balanced with experience.

The more education and experience one has the better chance of success one has; however, any negotiator knows a degree alone does not assure success.

Provides some status and possibly some academic disciplines to aid in developing and supporting negotiation positions. I do not feel it is a requisite to being a successful negotiator.

Iteration 2 Comments

(Mean 2.04; rank order 21 after Iteration 2)

Agree with "must be balanced with experience."

Most of the respondents must not have been college grads!!

13. EXPERTISE--How well the negotiator knows the product or service that he is negotiating to purchase.

Iteration 1 Comments

(Mean 3.00; rank order 17 after Iteration 1)

helps "snow" your counterpart.

Must have knowledge of product you are buying or you cannot communicate with the contractor.

A good familiarity is helpful. Usually, a true expert can be available to assist in technical areas. No one person could have sufficient expertise to compete in technical discussions with individuals who work in the area everyday.

Expertise should also cover the negotiator's technical skills, i.e. training and understanding of cost and pricing techniques, RIE calculations, burden determination allocability, etc.

Iteration 2 Comments

(Mean 3.12; rank order 18 after Iteration 2)

Familiarity with the product is desirable. If not familiar, use the experts available in the technical community to provide product expertise.

14. AUTHORITY--The degree to which the negotiator can on his own change or make decisions that pertain to the contract.

Iteration 1 Comments

(Mean 3.89; rank order 8 after Iteration 1)

There is no consistent application of this authority in ASD.

No authority merely means we're a hallow mouth piece in the system.

A certain amount of respect always goes with authority exercised prudently.

This is important because it upgrades the authority of the negotiator in the eyes of the other negotiating team.

Iteration 2 Comments

(Mean 4.00; rank order 8 after Iteration 2)

This aspect cannot be stressed enough.

This is important because it upgrades the authority of the negotiator in the eyes of the other negotiating team.

15. HIGH EXPECTATIONS--The degree to which the negotiator is confident that he can achieve his present negotiation goals.

Iteration 1 Comments

(Mean 3.45; rank order 15 after Iteration 1)

I consider this important only that I believe that the contract negotiator should not establish an arbitrary objective--but one that is well substantiated and can be considered reasonable. I believe it is extremely important that the contractor understands that our position is based upon a logical and reasonable basis. When this is not the case, I believe the contractor has either or no respect for the government representative.

And his ability to transmit/communicate his expectations to his opponent.

Negotiator must remain flexible.

Optimism nurtures success which pessimism breeds failure.

Be realistic, can't afford to get hung up on a "principle." Negotiator's job is to arrive at agreement.

Varies with degree of subjectivity/objectivity of the position. It is a symptom of the circumstances and available info. This is more a function of how realistic the negotiator has been in setting his goals. It is important to establish goals that are realistic, fair and reasonable so one can have high expectations of achievement.

Iteration 2 Comments

(Mean 3.67); rank order 12 after Iteration 2)

Confidence and high expectations are almost synonymous. Rate this feature up with confidence at 4.0.

Be realistic, can't afford to get hung up on a "principle." Negotiator's job is to arrive at agreement.

16. SKEPTICISM--The ability of the negotiator to question information presented to him to insure that he is getting the truth.

Iteration 1 Comments

(Mean 3.67; rank order 13 after Iteration 1)

could be better called "analytical capability."

on a reasonable basis.

fact finding is one of the most important.

This skepticism should be almost mechanical and include assignment of coefficients of confidence to each piece of info.

A healthy amount of skepticism is good, but too much can needlessly delay negotiations and conceivably develop mutual mistrust if carried too far.

Accepting things "on faith" or making assumptions are no substitute for proper fact finding and determination based on good information.

Iteration 2 Comments

(Mean 3.56; rank order 14 after Iteration 2)

Perhaps my hang-up is the word "skepticism"--certainly information should be questioned if not clear. I feel no necessity to question information if I believe it is correct.

Too often things are implied that are not 100% true.

17. REALISTIC--The ability of the negotiator to face facts and to use these facts to reach an agreement on a position.

Iteration 1 Comments

(Mean 3.91; rank order 7 after Iteration 1)

one of the top three.

this is better described by "position assessment."

Goes hand in hand with a rational, logical approach.

To be stubborn in the face of facts is a waste of time and totally unprofessional.

Iteration 2 Comments

(Mean 4.26; rank order 4 after Iteration 2)

Once one is sure he has facts--face them.

18. SELF-ESTEEM--The degree to which a negotiator respects himself to be equal or better than his opponent.

Iteration 1 Comments

(Mean 3.69; rank order 12 after Iteration 1)

but don't go overboard.

however, not to the point that the government negotiator acts in either an arbitrary or overbearing manner.

Important but often difficult to maintain when comparing your salary with that of your opponent.

A feeling of inferiority or disadvantage can lead to "defensive" rather than "offensive" actions. This gives the edge to one's opponent.

Iteration 2 Comments

(Mean 3.93; rank order 10 after Iteration 2)

This aspect ties in once again with high expectations and confidence which I rate at 4.0

19. STATUS--The ability of the negotiator to influence the negotiation process by virtue of his rank or hierarchial position in the organization.

Iteration 1 Comments

(Mean 2.00; rank order 20 after Iteration 1)

negotiators as such have very little real rank/position.

Probably the most overlooked element.

Little respect with little authority.

Can lend importance and increased credibility to proceedings.

Iteration 2 Comments

(Mean 1.93; rank order 17 after Iteration 2)

This question bothers me--to some extent it ties back into question 14 (authority) and 18 (self-esteem) in that responses require a subjective evaluation, by the individual answering the questionnaire, of his understanding of his authority, himself and his states. While I had no difficulty in answering 14 or 18, I have great difficulty in determining an appropriate response for 19. Why this question is more difficult I don't know.

Am of the opinion this factor should be rated 4.0. However, rank cannot change facts.

Negotiators as such have very little real rank/position. Probably the most overlooked element. Little respect with little authority. Can lend importance and increased credibility to proceedings.

20. SENSE OF TIMING--The ability to know when to invoke certain strategies to gain advantage of his opponent.

Iteration 1 Comments

(Mean 3.49; rank order 14 after Iteration 1)

we should not negotiate for advantage only for being equitable.

"advantage of his opponent" terminology tends to worry me--perhaps I've misunderstood intent of question.

Iteration 2 Comments

(Mean 3.41; rank order 17 after Iteration 2)

"advantage of his opponent" terminology tends to worry me--perhaps I've misunderstood the question.

Sense of timing should apply to reaching settlement, not to gain advantage.

Being able to sense when your negotiation opponent might agree to strike a bargain that's in the government's interest is extremely important. Often such openings are missed and later issues deadlock negotiations. I've seen it happen.

21. BELIEFS--The experiences of a person's past (i.e., religious convictions, marital status, etc.) that might influence a negotiator's performance.

Iteration 1 Comments

(Mean 1.11; rank order 22 after Iteration 1)

Hopefully, the negotiators past personal experiences has little or no affect on his negotiations. Negotiation should be based upon facts and logical, well thought out problems--not personal experiences.

Include these beliefs that do not support the capitalistic system.

Happy home life contributes to a persons sense of well-being, which in turn supports productivity.

This would be very remote unless we were dealing with a particular "unique" individual but generally no one person would exercise that much influence. This would be vital in state department type negotiations or possibly in foreign military sales.

These have no place in conducting proper negotiations.

Iteration 2 Comments

(Mean .89; rank order 23 after Iteration 2)

Hopefully, the negotiators past personal experiences has little or no affect on his negotiations. Negotiation should be based upon facts and logical, well thought out problems--not personal experiences.

Negotiations should stick with facts before him.

22. TACTFULNESS--The ability of the negotiator to say something to his opponent or his coworkers without offending them.

Iteration 1 Comments

(Mean 3.32; rank order 16 after Iteration 1)

can be a tool.

Negotiation is a team effort. Cooperation rather than dissention is needed.

Tactfulness is highly important in dealing with people but it can be overdone. The best policy is to know the opponent or worker and play it accordingly. NEVER sacrifice honesty for tactfulness.

Iteration 2 Comments

(Mean 3.52; rank order 15 after Iteration 2)

Tact has its place especially with coworkers.

23. EXPERIENCE--The amount of practical knowledge gained through personal participation in actual negotiations.

Iteration 1 Comments

(Mean 3.86; rank order 9 after Iteration 1)

Desirable, but everyone has to start without experience.

Iteration 2 Comments

(Mean 4.07; rank order 6 after Iteration 2)

Experience is gained by moving up through the ranks and continual upgrading of negotiation complexities.

24. ADAPTABILITY--The ability of the negotiator to react (i.e., to think on his feet) to the changing circumstances of the on-going negotiation process.

Iteration 1 Comments

(Mean 4.14; rank order 2 after Iteration 1)

At a minimum he should know when his position is being jeopardized.

Inflexibility is a tremendous handicap.

This can be important depending on immediate circumstances, but sometimes its better to act by stopping negotiations temporarily (recess) than by reacting and possibly putting oneself in an untenable position.

Iteration 2 Comments

(Mean 4.37; rank order 2 after Iteration 2)

No comments.

25. ACADEMIC DISCIPLINE--The extent to which the type of college education (i.e., Business Administration, History, Philosophy, Engineering, etc.) enables the negotiator to more successfully negotiate a contract.

Iteration 1 Comments

(Mean 2.20; rank order 19 after iteration 1)

Philosophy??

Business Administration is very helpful. History and Philosophy are useless.

The man and his personality and experience is more important.

A background in business or law definitely would give a negotiator an advantage. Engineering would not be too helpful because of so many varied disciplines involved.

Most important early in process of gaining negotiation experience. A business/econ type degree can give a "new" negotiator some insight/understanding into the econ/managerial factors that drive negotiations, a psychology degree insight in personnel factors, an engr degree insight into technical factors, etc.

Iteration 2 Comments

(Mean 2.11; rank order 20 after iteration 2)

Negotiation ability is in-born or developed, not taught in classrooms. A college degree however does aid in understanding--especially business oriented degree.

Bus. Admin. is much more important than the others mentioned.

26. TASK ORIENTATION--The degree to which the negotiator understands and is dedicated toward achieving procurement objectives; i.e., a fair and reasonable price for the USAF.

Iteration 2 Comments

(Mean 3.70; rank order 11 after Iteration 2)

I'm not sure I totally understand the point. I've rated it important only because if the negotiator (or any

other job for that matter) does not know what his objectives are, he's either been grossly undereducated/indoctrinated in his field or he's in the wrong line of work.

This attitude is mechanical and is an "assumed" in the character of any contract negotiator.

All is fair in love, war, and negotiations.

Very important. I have found that mission oriented contract negotiators also become the best contract negotiators insofar as price and timeliness is concerned.

27. REPUTATION--The degree to which the reputation of the negotiator for his fairness and strength in negotiating extends toward influencing the final outcomes of the negotiation.

Iteration 2 Comments

(Mean 3.48; rank order 16 after Iteration 2)

As is the case of question 19, I have problems with this question. To some extent, I would like to think that demonstrated integrity and rational judgments would be of some importance in influencing negotiations. However, on the other hand my past experience leads me to question whether this is indeed the case. I find it very difficult to determine whether my response to this question is on a "philosophy" or "cold hard facts" basis.

Reputation is important and is developed over time.

Everyone has one. It certainly can have a tremendous influence on the perceptions, attitudes, and consequently the strategies of your opponents.

It's not necessary to have a good reputation. However a bad reputation will hurt.

This is an outgrowth of #4, ones integrity.

Winning through intimidation.

Very important.

APPENDIX E

THE SPEARMAN RANK CORRELATION: r_s

APPENDIX E

THE SPEARMAN RANK CORRELATION: r_s (20:202:13)

The Spearman Rank Correlation statistical technique measures the association between two variables. In this research the variables tested were directorates numbered 1, 2, and 3. The test was used to determine if there was a statistically significant association between the way the individual organizations responded to the questionnaire. As such, two hypotheses are presented:

H_0 : $\rho = 0$ each organization tested responded as an independent entity.

H_1 : $\rho \neq 0$ the two organizations tested responded as a total entity.

The following procedure describes the use of the Spearman Rank Correlation technique:

1. Rank the average responses from one organization (variable X) from 1 to 27. Rank the responses from a second organization (variable Y) from 1 to 27. (Where two or more questions have the same score, each of them is assigned the average of the ranks which would have been assigned if no ties had occurred.)

2. List the 27 questions and then list beside the respective question the response and rank for both variables X and Y.

3. Determine the difference (d_i) between the X and Y rankings and then square that difference ($=d_i^2$). Sum the d_i^2 's for the 27 questions to determine $\sum d_i^2$.

4. Compute the Spearman Rank Correlation (r_s) by using the following formula:

$$r_s = 1 - \frac{\sum_{i=1}^N d_i^2}{N(N^2-1)}, \text{ where } N = 27.$$

5. Determine r_{critical} for a two-tailed test where $\alpha/2 = .001$ (critical values shown in Table of Critical Value of r_s).

6. If r_s equals or exceeds r_{critical} , then H_0 cannot be rejected. If r_s is less than r_{critical} , then H_0 is rejected.

SELECTED BIBLIOGRAPHY

SELECTED BIBLIOGRAPHY

A. REFERENCES CITED

1. Baily, P. J. H. Purchasing and Supply Management. 3d ed. London: Chapman and Hall, 1973.
2. Belden, David L., and Ernest G. Cammack. National Security Management: Procurement. Washington, D.C.: Industrial College of the Armed Forces, 1973.
3. Constantino, George E., Jr. "The Negotiator in Collective Bargaining," Personnel Journal, Vol. 54, No. 8 (August, 1975), pp. 445-47.
4. Dalkey, Norman C. Delphi. Memorandum P-3704. Santa Monica, California: RAND Corporation, October, 1967.
5. _____. Experiments in Group Prediction. Memorandum P-3820. Santa Monica, California: RAND Corporation, March, 1968.
6. Gomez, Major Richard H., USAF. Assistant Director, Directorate of Procurement Operations, Deputy for Procurement and Production, Aeronautical Systems Division, Wright-Patterson AFB, Ohio. Personal interview. 30 January 1976.
7. Helmer, Olaf. Systematic Use of Expert Opinions. Memorandum P-3720. Santa Monica, California: RAND Corporation, November, 1967.
8. Hermone, Ronald H. "How to Negotiate . . . and Come Out the Winner," Management Review, Vol. 63, No. 11 (November, 1974), pp. 19-25.
9. Karrass, Chester L. The Negotiating Game. New York: The World Publishing Company, 1970.
10. _____. Give and Take. New York: Thomas Y. Crowell Company, 1974.
11. Lee, Lamar, Jr., and Donald W. Dobler. Purchasing and Materials Management. New York: McGraw-Hill Book Company, 1965.

12. Likert, Rensis. "A Technique for the Measurement of Attitudes," Archives of Psychology, No. 140, (June, 1932).
13. Martin, Lieutenant Colonel Martin D., USAF. Assistant Professor in Logistics Management, Graduate Education Division, School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB, Ohio. AFIT course MS 5.35, "Procurement and Acquisition Management," class 1976B. Lecture. 13 November 1975.
14. McDonald, Paul R. Government Prime Contracts and Sub-contracts Service. Covina, California: Procurement Associates, 1969.
15. Nierenberg, Gerald I. The Art of Negotiating. New York: Hawthorne Books, Inc., 1969.
16. Preston, L. E. Contract Negotiations and Results in Aircraft Procurement: Case Studies of the B-52 and B-58. Memorandum RM-3254-PR. Santa Monica, California: RAND Corporation, 1962.
17. Riemer, W. H. Handbook of Government Contract Administration. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969.
18. Rule, Gordan W. The Art of Negotiation. Denver: Lowry Technical Training Center, Department of Logistics Training, Systems Procurement Office. Course Handout 30ZR6531-3-1-9, October, 1971.
19. Schnitzner, Paul A. Briefing Papers. Associate General Council U.S. Accounting Office. Washington, D.C.: Federal Publications, August, 1975.
20. Seigel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc., 1956.
21. Selby, Samuel M. Standard Mathematical Tables. 23rd ed. Cleveland: The Chemical Rubber Company Press, Inc., 1975.
22. Taliaferro, Richard T. Economic Analysis of Public Programs. Dayton, Ohio: AFIT School of Systems and Logistics, 1972.

23. U.S. Air Force Systems Command. AFSC Civilian Procurement and Production Career Development Program--Buying Organizations. AFSCM 50-5. Washington: Government Printing Office, 1972.
24. _____. Organizations and Functions Headquarters Air Force Systems Command. AFSC 23-1. Washington: Government Printing Office, 1975.
25. U.S. Air Force Systems Command, Aeronautical Systems Division. Directorate of Pricing Semi-Annual Historical Report FY 1975. Wright-Patterson AFB, Ohio, 22 July 1975.
26. U.S. Department of the Air Force. Officer Classification Manual. AFM 36-1. Washington: Government Printing Office, May, 1969.
27. U.S. Department of Defense. Armed Services Procurement Regulation. Section III: "Procurement by Negotiation." Washington: Government Printing Office, 1975.
28. _____. Military Prime Contract Awards. Washington: Government Printing Office, July-December, 1974.

B. RELATED SOURCES

- American Association of School Administrators. Critical Incidents in Negotiation. Washington, D.C.: American Association of School Administrators, 1971.
- Campbell, William G., and Stephen V. Ballou. Form and Style: Theses, Reports, Term Papers. 4th ed. Boston: Houghton Mifflin Company, 1974.
- Colossi, Thomas R. "The Use of Modified NASA in Disputed Resolution," Personnel Journal, Vol. 53, No. 10 (October, 1974), pp. 761-66.
- Cross, John G. The Economics of Bargaining. New York: Basic Books, Inc., 1969.
- Currie, Edward M. "Acquisition Costing and the Bargaining Area," Management Accounting, Vol. LVI, No. 3 (September, 1974), pp. 29-37.
- Dalkey, Norman C. The Delphi Method: An Experimental Study of Group Opinion. Memorandum RM-5888-PR. Santa Monica, California: RAND Corporation, June, 1969.

- Dalkey, N., B. Brown, and S. Cockran. The Delphi Method III: Use of Self Ratings to Improve Group Estimates. Memorandum RM-5957-PR. Santa Monica, California: RAND Corporation, 1959.
- . The Delphi Method IV: Effect of Percentile Feedback and Feed-in of Relevant Facts. Memorandum RM-6118-PR. Santa Monica, California: RAND Corporation, March, 1970.
- Hood, Joseph L., Ph.D. Assistant Professor in Logistics Management, Graduate Education Division, School of Systems and Logistics, Air Force Institute of Technology (AU), Wright-Patterson AFB, Ohio. Personal interview. 24 October 1975.
- Peters, Edward. Strategy and Tactics in Labor Negotiations. New London, Connecticut: National Foremans Institute Advisor of Vision, Inc., 1955.
- Phillips, Victor F., Jr. "Some Interpersonal Aspects of Negotiation," Air University Review, Vol. XXI, No. 4 (May-June, 1970), Washington: Government Printing Office.
- Pooler, Victor H., Jr. The Purchasing Man and His Job. New York: American Management Association, 1964.
- Sackman, Morris. "Make Your Own Simulations to Train Public Managers in Collective Bargaining," Public, Personnel Management, Vol. 4, No. 4 (July-August, 1975), pp. 231-37.
- Schelling, Thomas C. The Strategy of Conflict. Cambridge, Massachusetts: Harvard University Press, 1960.
- U.S. Air Force Systems Command, Aeronautical Systems Division, the Air Force Systems Council. Position Description, SMK-2360. Wright-Patterson Air Force Base, Ohio, August, 1971.
- U.S. Department of Defense. Armed Services Procurement Regulations. Section II: "Procurement by Formal Advertising." Washington: Government Printing Office, 1975.
- U.S. Department of the Air Force, School of Systems and Logistics, Air Force Institute of Technology (AU). Style and Guidelines Manual for Theses and Technical Reports. 5th revision. Wright-Patterson AFB, Ohio, June, 1975.

Voss, John D. A Profile of Procurement Personnel Problems.
Study report Class 73-2. Fort Belvoir, Virginia:
Defense Systems Management School, 1973.

Wall, James A., Jr. "Managing Negotiators," Business
Horizons, Vol. XVII, No. 1 (February, 1975), pp. 41-44.

BIOGRAPHICAL SKETCH OF THE AUTHORS

BIOGRAPHICAL SKETCH OF THE AUTHORS

Captain Russell V. Whitley was commissioned in 1968 having graduated with a Bachelor of Arts degree in Economics from North Carolina State University. He served as a pilot in the F-101, T-28, and T-33 aircraft prior to attending AFIT. While attending AFIT, he was a member of Sigma Iota Epsilon, Alpha Iota Delta and National Contract Management Association. His next assignment after graduation is to the Armament Development/Test Center, Eglin Air Force Base, Florida as a Procurement Officer.

Captain Theodore J. Novak, Jr. was commissioned in 1966 after receiving a Bachelor of Science degree in Biology from Duquesne University. He served with the Strategic Air Command as a B-52 Radar Navigator prior to attending the Air Force Institute of Technology. While attending AFIT, he was a member of Sigma Iota Epsilon and National Contract Management Association. His next assignment after graduation is to Research and Development Procurement, ASD, Wright-Patterson Air Force Base, Ohio as a Procurement Officer.